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COLOURED

ILLUSTRATIONS

OF

British Birds,

AND THEIR

Eggs.

BY H. L. MEÿER.

VOL. II.

CONTAINING SIXTY PLATES.

LONDON:
G. W. NICKISSON, 215, REGENT STREET,
SUCCESSOR TO THE LATE JAMES FRASER.
1844.

LONDON:
Printed by S. & J. BENTLEY, WILSON, and FLEY,
Bangor House, Shoe Lane.

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N. 10.

ILLUSTRATIONS

OF

BRITISH BIRDS.

INSESSORES.
DENTIROSTRES. *MERULIDÆ.*

PLATE XLVI.

MISSEL THRUSH.

MERULA VISCIVORA. (*Ray.*)

THIS very beautiful species exceeds in point of size all our British Thrushes, and we believe is also superior in this respect to all the remaining species of the Merulidæ common to Europe. In England it is of far less frequent occurrence than the song-thrush, and is partially distributed, preferring well-wooded and rather elevated districts. It is resident throughout the year with us, but more frequently seen in winter than in summer, as its wants at that season overcome its usual shyness, and it approaches nearer to our gardens, and visits hedge-rows in search of berries. It is a bird of unsocial habits, and in some parts of the Continent, where it is migratory, it is observed to travel alone, or, at most, in

small parties,—most probably the family of the preceding year, —and does not associate in flocks, as is the case with the fieldfare and redwing. Its quarrelsome disposition is apparent in the violent attacks it makes upon any intruder upon its chosen haunts. On this subject we have some curious particulars communicated by a friend, the Rev. E. J. Moor, from his journal:—"We have at this time, November 8th, on our lawn at Bealings, two whitethorn bushes, about twenty yards from each other, one well-covered with berries, the other getting very bare. The cause of this difference is, that a Misseltoe Thrush has taken possession of one, namely, the well-covered bush, which he has had for some weeks. Whenever a blackbird or common thrush lights on this bush he immediately drives it off very furiously. He suffers chaffinches and other small birds to come on, and seldom disturbs them at all, and never much; but he never allows a blackbird or thrush to remain on his bush for an instant. He does not disturb them if they go to the *other* whitethorn, where they may and do feed quite quietly. This bush is getting very thin of berries. The Misseltoe Thrush does not leave the lawn and its neighbourhood, nor join the flock of Missel Thrushes which sometimes comes upon the lawn. We have not, however, noticed the arrival of this flock since our Missel Thrush took possession of the bush. At this moment there are two blackbirds on their own bush feeding quietly.

"December 17.—I have observed the Misseltoe Thrush's bush almost every day, and have never seen one blackbird or thrush suffered to remain on it for an instant. There is scarcely a berry left on the blackbird's bush, but the Misseltoe Thrush's bush is quite red with them. He keeps sole possession.

"January 17, 1835.—A pair of Misseltoe Thrushes have now got the bush, who probably killed the original possessor,

as a fine dead Misseltoe Thrush was, a few days ago, found near the bush, having a wound in his head.

"March 2.—A blackbird settled on the Misseltoe Thrush's bush to-day. He was allowed to remain there, although a Misseltoe Thrush was singing on a fir-tree not far off, and quite within sight of what was going on in the bush. This seems to confirm the notion that the original possessor was killed by the more recent pair, who were either more pacific in their tempers, or were less moved by hunger to be tenacious, as now the birds are able to find other food besides berries.

"October 15, 1836.—A Misseltoe Thrush usurping the same whitethorn bush on the lawn, at present only driving off blackbirds and such larger kinds of birds as before: chaffinches and other small birds are left to feed unmolested; a jay, coming for a berry, was severely attacked, and at last obliged to quit the bush; but he flew away with a berry in his bill."

Besides berries of various sorts, including those of the misseltoe and juniper-tree, these thrushes feed upon snails, worms, beetles, grasshoppers, etc.

The nest of the Misseltoe Thrush is large and firm in construction; it is built with a few sticks, dry grasses, and roots, interwoven together, within which is a stout lining of clay, similar to the blackbird's, and lined thickly with fine grasses. The outside covering of the nest is either green moss or lichens, usually resembling in colour the branch on which the nest is placed: whether this similarity of colour is chosen for the purpose of concealment, or is merely in accordance with the beautiful harmony that is everywhere preserved in nature, we cannot decide; but we have seen Missel Thrushes' nests placed in situations so exposed that it would appear as if concealment for the purpose of safety was not considered as of any importance. We remember one

that was built on the outer branch of a small oak-tree, overhanging a lane, the common approach to the village for foot-passengers, where, before the leaves were out upon the tree, the hen bird might be plainly seen by every passer by, sitting upon her eggs, and not a hawk could fly over without observing the spot. This nest was, nevertheless, most carefully covered with the same white lichen with which the bark of the tree was clothed.

Much diversity of opinion appears to prevail with regard to the song of the Missel Thrush, whose voice is sometimes heard loud and clamorous on the approach of a storm, and sometimes raised in angry cadence when its rights are invaded by any intruder upon its haunts. Its song, properly so called, was considered by Montagu as superior to that of any other of the Merulidæ, although popular opinion usually gives the preference to the song thrush.

The Missel Thrush has also notes highly expressive of sorrow for the loss of its young. On this subject our friend, the Rev. E. J. Moor, says:—"This spring, 1841, I saw a hawk on our lawn, carrying off a young Misseltoe Thrush, just full-grown; the old birds were attacking the hawk furiously, uttering sounds highly expressive both of terror and anger. The hawk flew to a fir-tree close at hand, and there was forced to leave the young bird, and to fly away without it, the old birds following it still, but not with such loud notes as before. When they had driven the hawk to some distance, they returned to the fir-tree, and notes of lamentation were set up (I think only by one of the old ones, probably the female). The notes were faint, moaning, and periodical; very different in expression from those lately uttered, and seemed very clearly to tell that the young one had died under the talons of the enemy."

The Missel Thrush is common, and resident throughout the year in most of the temperate parts of Europe, except

Holland, where it is very rare. In Thuringia, Bechstein speaks of it as a bird of passage, leaving that part in December, and returning in February.

Its French name, Draine, and its German appellation, Schnarre, according to Temminck, are descriptive of its noisy vociferations whenever its nest is approached. Brehm calls this species Baum Drossel (Tree Thrush), from its custom of sitting singing upon taller trees than are frequented by other species.

The Missel Thrush may be easily reared from the nest, and becomes very tame; it will eat almost any kind of food, meat, bread and milk, oatmeal moistened into a paste, etc. It is a very hungry bird, and requires to be kept in a large cage, as it is very careless of its plumage; it also needs much water for bathing, in which it much delights.

The Missel Thrush, although dressed in very sober colours, is a handsome bird. Its upper plumage is olive-brown, tinged with ash, wing-coverts brown, bordered with dull-white, the lower part of the back, and upper coverts of the tail, lighter brown, inclined to rufous. The quill-feathers dusky, edged with cinereous, as also the tail, which has some of the outer feathers tipped with white. The under coverts of the wings are greyish-white, and there is a streak of the same colour between the beak and the eye. The beak is brown, yellowish at the base; the iris brown; the legs and toes brownish flesh-colour. The under parts of the bird are white, tinged with yellow-ochre, each feather marked at the tip with a dusky spot, which is of a round form on the breast, belly, and flanks, angular on the sides of the neck; the ear-coverts are greyish-white, spotted with brown. The female very nearly resembles the male, but is whiter on the under parts. The young of the year are paler and more ash-coloured on the upper parts; the feathers of the head, neck, and scapulars, mottled with white.

The eggs of this species vary somewhat in colour and markings; some are greenish-white, spotted with brownish-red and purple, others are reddish-white in the ground-colour, with large blotches of red-brown: they also differ much in size, the one figured in our plate being a large specimen. They are usully four or five in number.

The entire length of the Missel Thrush is eleven inches; the wing, from the carpus to the tip, six inches; the tarsus one inch and a quarter; the middle toe one inch; the bill, from the forehead, three quarters of an inch.

The generic characters of the *Merulidæ* are:—Bill, of moderate length, slightly notched near the tip, straight at the base, and inclining downwards at the point; nostrils partly covered with a membrane; gape fringed with bristles; legs of moderate length and strength, the tarsus longer than the middle toe; the outer and middle toes united at the base. The first quill-feather very short, the third and fourth the longest in the wing. The flesh of all this genus is remarkably good.

The egg No. 46 belongs to the Missel Thrush.

N. 47.

INSESSORES.
DENTIROSTRES. *MERULIDÆ.*

PLATE XLVII.

JAPANESE THRUSH.

TURDUS VARIOUS. (*Horsfield.*)

THE rare species, called by British ornithologists White's Thrush, the *Turdus various* of Java,* and the *Turdus aureus* of the Moselle,† are by Temminck brought under one article; and we think the reasons assigned by this eminent ornithologist may be the most acceptable information that can be given respecting a bird so little known in England. "No other distinction," says Temminck, "than a slight difference in the size of the beak can be observed between the two races of this species, of which the one appears occasionally in Europe, and is found as far eastward as Japan; the other is met with from the Isles of Sunda to New Holland. These latter have the beak usually a little longer, and rather more robust than the race which shows itself occasionally in our latitudes, and of which specimens are received from Japan; although, in a great number of subjects from India which I have examined I have found individuals whose beak was certainly neither larger nor longer than those of specimens from Japan. I unite them, consequently, contrary to the opinion of Mr. Gould, who makes two species of them, and appears also much inclined to form a third, for the reception of subjects from Australia."

* Horsf., in Zoological Researches in Java. † Stoll, Faune de la Moselle.

"At Java this species is found only in mountains from six to seven thousand feet in height. In Japan it inhabits also lofty mountains. Its food is said to consist of insects and worms.

"This species visits, occasionally, the west of Europe; it is abundant in Japan, and perhaps may abound equally in other parts of Asia, from whence, probably, the specimens have come that were obtained in Europe.

"In the colouring of the two subjects taken at Hamburg, and the specimens that came from Japan, I have not been able to detect any marked difference, and only a slight difference can be observed in the size of the beak between these and the Javanese specimens. Subjects from Australia exceed those from Japan and Java a little in size, although they wear the same plumage."

The above is a free translation of the information on this subject, contained in the fourth volume of Temminck's Manual d'Ornithologie; and when we consider the favourable opportunity possessed by that author of studying Oriental specimens from Java and Japan, we cannot but consider his opinion as of the utmost weight.

The specimens that have been noticed of this species as occurring in Europe, are two, shot on the Elbe; a third, supposed to have been shot in the New Forest, Hampshire, now in the possession of Mr. Bigge of Hampton Court; and a fourth, that was shot also in Hampshire by the Earl of Malmsbury.

The bird figured in our plate is from a subject in the museum of the Zoological Society, from which we took the following measurements: — Length of the wing, from the carpus to the tip, six inches and three-eighths; length of the beak from the forehead to the tip, eleven lines; from the tip to the gape, one inch five lines; length of the tarsus, one inch one line; of the middle toe, one inch

six lines; of the hind toe, one inch. The tail has fourteen feathers. In the relative measurements of the tarsus and middle toe this Thrush differs from the characters usually quoted by systematists as belonging to the Thrushes, whether taken as restricted to the *Meruliddæ*, or in the more enlarged sense of the genus *Turdus*, namely, "tarsus longer than the middle toe," this specimen having the tarsus *shorter* than the middle toe by nearly half an inch.

It is to be presumed that this Thrush does not vary in the tints of the plumage, or in the distribution of the colours, from circumstances of age or sex, since Temminck describes all he has seen as similar in appearance.

№. 48.

PLATE XLVIII.

FIELDFARE.

MERULA PILARIS.

THE FIELDFARE, the next of this beautiful tribe that offers itself to our notice, is a native of the sombre forests of the north of Europe. In these wild regions it passes the short summer season; but it is unable to sustain any great degree of cold, and is consequently found to commence its migration southward in September or October.

Fieldfares perform their journeys in large companies, and great numbers of these birds spread themselves over all the countries of the middle parts of Europe, shifting their quarters from time to time as the various changes of the season, the supply of food, or other exigencies may require. In mild and open weather they are seen to frequent low meadow-grounds, for the sake of the worms and other insects that are to be found there; but when from severe frost these resources fail them, they resort to hedges and copses of white-thorn, juniper, and other berries, on which they become very fat, and are then delicious eating.

In Britain they make their appearance about November; and we have constantly observed their arrival to be the forerunner of increased cold in the atmosphere, the Fieldfares preceding the change of the temperature by about two days. They appear unable to bear the cold so well as the native

thrushes of our country, and in severe weather either flock to sheltered situations, where plenty of food can be procured, or pass on towards warmer countries, from whence they return in March or April; and again leave us, to proceed northward towards their summer breeding stations.

Very few instances of the Fieldfare remaining to breed in England have been authenticated, the greater part retreating northward to Sweden, Norway, and Russia.

In those countries Fieldfares have been found rearing their young in large numbers, and, contrary to the habits of other thrushes, living in society.

The nest of the Fieldfare is described as resembling very much those of the blackbird and ring ouzel, composed externally of coarse grass and weeds, plastered within with mud, and lined with grasses of a finer texture. The eggs are from four to six in number, and much resemble those of the blackbird.

Fieldfares are considered a great delicacy in Germany during autumn, where they are taken in great numbers by means of horse-hair springes, and sent as presents to other parts of the Continent, where they are scarce. The chief cause of their fine flavour is to be attributed to their being obliged, by severe frosty weather, to live upon juniper berries, which grow in very great abundance along the Rhine and other wooded districts. When these birds are packed up for the purpose of transport, they are half-plucked, and packed in fresh-gathered juniper berries, which also contributes greatly to increase the flavour. The German name of this bird is Wachholder Drossel, which signifies Juniper Thrush.

It may be acceptable to persons living in the country to know how, on the Continent, we set traps for taking these birds, and consequently we give the description as follows:—

A twig, about a yard long,—willow is the best wood for

the purpose,—is bent in the form of a triangle, and fastened by one corner to the branch of a shrub about four feet from the ground; to each side of the triangle is fixed a horse-hair noose, which hangs over a mountain-ash berry that is stuck in a slit in the centre or horizontal part of the triangle; and in a plantation or pleasure-ground, right and left of the paths, such traps should be tied, in the way described, about three feet apart, and regularly supplied with berries every day about noon, when the snared birds are taken out, and the horse-hairs properly disposed. We have taken from one to three hundred birds of the thrush tribe in one morning, in Holland, in this manner.

The Fieldfare is found southward as far as Syria and Asia Minor; it is also very common in autumn in some parts of the valleys of the Swiss Alps. It is said to remain the whole year in Austria.

The song of the Fieldfare is stated by Bechstein to be only a harsh disagreeable warble, but it is said by others to have notes soft and agreeable. We have never heard it sing, as we have only had this species caged in the winter.

The colouring of the Fieldfare is more varied than that of the two preceding thrushes; the head and nape of the neck are fine grey, the former spotted with dusky; the back, shoulders, and lesser coverts of the wings, chesnut-brown; the larger coverts rust-brown, with a greyish tinge: the quill and tail-feathers dusky; the lower part of the back greenish-grey. The chin, sides of the neck, and breast, are pale rust-yellow, marked with blackish heart-shaped spots; the flanks are similarly marked, upon a white ground. A pale-buff line extends from the forehead over the eye. The feathers between the bill and eye are black, and the same colour extends beneath the eye and over part of the ear-coverts; a dark line also passes from the corner of the lower mandible to behind the ears, in a semicircle. The

iris is dark-brown; the eye-lid, inside and corners of the mouth, yellow, which in the spring approach to orange. The beak is rich yellow in summer, with a black tip; in winter it is tinged with brown. The legs are dark-brown.

In the female the colours are less pure.

The Fieldfare is about ten inches in length; some measure more; the wing measures, from carpus to tip, five inches and a half; the tail is four inches and a quarter long, and the wings reach nearly half-way down it when closed: the tarsus measures one inch four lines, the middle toe one inch three lines, the hinder, nine lines; the claws are large in proportion, particularly the hinder.

The egg No. 48 belongs to the Fieldfare.

46.

48.

Pl. 49.

INSESSORES.
DENTIROSTRES. *MERULIDÆ.*

PLATE XLIX.

SONG THRUSH.

MERULA MUSICA.

THIS well-known bird, one of our finest singers if we except the redbreast, is, like him, not only British by birth, but a constant resident in his native land. His sweet and varied song begins with the dawn, and continues, at intervals, throughout the day; but the evening appears the time in which he most delights,—then he pours forth uninterruptedly his rich and eloquent strain. "Of all our resident birds, the inflexions of its notes are the most modulated, distinct, and harmonious. Perched on the naked branch of a tree, this charming vocalist continues to pour forth his clear, melodious strains; gradually they rise in strength, then fall in gentle cadences, becoming at length so low as to be scarcely audible; especially towards evening, the song is continued almost without intermission, and does not entirely cease till night draws round its sable shroud." If conscious of being observed, his song suddenly ceases, and he silently drops from his branch into the underwood beneath.

The song of this species is divided into distinct modulations, each consisting of four or five syllables; every modulation is repeated in exactly the same form, after the manner of the nightingale, from three or four to about seven times, and then exchanged for another movement.

These are sometimes slowly, sometimes rapidly, pronounced, and the tones so varied as often to appear to proceed from several songsters, placed at different distances from the listener. We have heard Song Thrushes imitate very successfully the beautiful chant of the nightingale.

The Song Thrush is very generally diffused throughout England; and as it does not confine itself to the woods, as the missel thrush does, it is more seen and known. It is the least shy of the Thrush tribe; it inhabits and frequents gardens at all seasons, but in winter we have known it almost as familiar as the robin, and if care is taken to invite it with a little food, will approach close to the windows in search of it. One hard winter, observing several thrushes in the garden, we collected from some hidden corners, where we knew we should not look in vain, a number of common garden snails, which we strewed beneath the laurel bushes where the snow was scantiest. Our snails were soon discovered by the thrushes, and a convenient stone being selected, which the hard frost had glued into the grass-plot, the snails were ere long consumed.

The manner in which birds of this tribe break the shells of snails to procure their flesh is, of course, well known; but these thrushes are in habits, as in descent, truly ancient Britons, and regularly return to the stone they have chosen for their cromlech, on which they sacrifice their victims.

The Song Thrush is a very early singer, beginning his song frequently with the new year. In a "comparative view of seven years," supplied by a friend, this bird is cited as beginning to sing between January the 3rd and February the 26th, according to the season. It is also one of the earliest in commencing nidification, and usually constructs its nest among the branches of a low bush, or in the midst of overhanging brambles beside a ditch or bank, and as the nest is often placed among deciduous shrubs that have not

yet regained their spring leafing, it is frequently very conspicuous.

The usual materials for the construction of the nest are a few dry twigs, chiefly those of the birch-tree, interwoven with green moss and grass stalks, so as to form a frame of basket-work, very beautifully constructed: this is lined with a thin layer of cow-dung, which forms the interior of the nest, there being no after-lining of grass, as in the nests of the missel thrush and blackbird. This unlined nest is, nevertheless, warm and sheltered, on account of its depth, and the impervious nature of its lining. The nest of this species is remarkably light, when compared with the nests of our other indigenous species. Among some ordinary sized nests in our possession, one of the blackbird weighs six ounces, whilst a nest of this species, on account of the superior lightness of the material used in lining, weighs only three. The missel thrush's nest is still heavier than that of the blackbird. Although so light and thin, the Song Thrushes' nests possess a great tenacity, and power of resisting the influence of the winds and storms, so prevalent at the early period of the year at which they are constructed. The Rev. E. Moor says, in reference to this subject, "A very violent hurricane of wind occurred this afternoon, November the 29th, the most violent I ever witnessed: the whole day was boisterous, but the hour's hurricane excessive. Several fir-trees, &c., were blown down on the lawn and other places of the farm. Several days after this storm I was at the Rev. W. Kirby's house at Barham, and saw a Thrush's nest standing firm on the branch of an elm-tree in his garden; the nest was in an exposed place; it had been there ever since the spring, and appeared in no way injured by the violence of the storm."

The Song Thrush, as before mentioned, breeds very early. By the beginning of April nests may be found containing

eggs, and young birds are frequently hatched about the middle of the month.

The Song Thrush is watchful and cunning when it thinks danger is near; if pursued by a sportsman along a hedge it skulks into a thick part, where it carefully lies concealed until its pursuer has safely passed the spot, and then flies off in an opposite direction, with a loud chattering noise, as if rejoicing in the disappointment of its enemy.

The entire length of the Song Thrush is nearly nine inches. The beak from the forehead to the tip measures eight lines; from the tip to the gape one inch. The wing from the carpus to the tip is four inches and a half; the tail extends an inch and a half beyond the closed wings. The tarsus is one inch four lines in length; the middle toe about one inch.

The plumage of the upper parts from the forehead to the tail, olive brown; the wing-coverts and tertials wood-brown, edged and tipped with pale buff. The spurious wing and secondaries edged with rufous; the primary quill-feathers dusky, bordered with pale ochre, yellow at the roots; the tail wood-brown; under-coverts of the tail white. On the under plumage the chin, belly, and vent are white; the breast and flanks are rust-colour, more or less tinged with olive; the ear-coverts dusky. The upper mandible is dusky; the ridge of the upper mandible and the greater part of the lower mandible straw-colour; the orbits are straw-colour, and an irregular line of the same passes from the lower mandible and borders the ear-coverts. A dusky grey line passes from the nostril to the orbit of the eye, over which runs a line of flesh-colour, extending backwards above the eye. The legs and feet are brownish flesh-colour. The iris is rich dark-brown; the eyelid grey.

The young bird when still a nestling has the top of the head hair-brown, mottled with rust-colour; the wing-coverts

and mantle also brown, with a spot of rust-colour upon the shaft of each feather; the greater coverts of the wings and the tertials are clove-brown; the quill-feathers of the wings and tail are dusky. The under parts of the bird are spotted as in the adult, but the rufous colour on the sides of the face and chin is darker. The inside of the mouth is orange, the corners of the gape bright yellow.

Although the Song Thrush is indigenous with us, and does not find occasion to leave our islands, the number of them is greatly increased by flocks which migrate from the northern parts of Europe to milder climates, in autumn. Hence may arise the not unfrequent occurrence of the white variety of this species. About a year and a half ago, a friend of ours informed us, that a gentleman residing in London had brought up a brood of white Song Thrushes, four in number, which were then in perfect health and spirits.

It may here be acceptable to know that the best mode of rearing young Thrushes is by feeding them with fig-dust, mixed up with water to a paste-like consistence; now and then, also, an egg chopped up in this food, or a little raw meat, chopped up with bread. It is very necessary to pay particular attention to keep the cages of young birds clean and dry, or they will invariably die of cramp.

The egg No. 49 belongs to this species.

Pl 50.

PLATE L.

REDWING.

MERULA ILIACA.

TOWARDS the end of October, or beginning of November, vast flocks of this species begin to arrive from the north of Europe, where they have passed the summer months; their appearance is usually, like that of the fieldfare, the precursor of increasing cold, from which they are taught to flee by the unerring guide of nature. Their arrival in this our southern part of England does not exhibit the peculiar features that distinguish it in Holland, and other parts of the Continent, which may be supposed to be their first resting-place in their passage from the north to more southern climates. Here, their arrival and times of feeding are not confined to any particular period of the day; in Holland, on the contrary, so regularly do the flights of this bird arrive after a night's passage that particular hours of the day may be stated as the times when they alight to feed. So certain is this, that every child in Holland knows that eleven and three o'clock are the times when our traps must be visited for Redwings, and other migratory thrushes, which have been snared between the hours of nine and ten in the morning and one and two in the afternoon. The construction of these traps we have already described in the account of the fieldfare.

In fine weather, it is supposed that Redwings travel all

night, as at such times they have been observed to alight in the morning in a state of much exhaustion, as if from a lengthened flight. Tall hawthorn-trees are frequently chosen for a resting-place after their journey; on these they may be seen to rest in great numbers, making at the same time a loud chattering noise.

They may be easily approached, and consequently fall a ready prey; and their flesh is very delicious. The cause of the tameness, or unconsciousness of danger, which this species exhibits, may be traced to their northern origin, being chiefly reared in uninhabited wildernesses and forests, where human enemies, at least, are rarely met with, and are, consequently seen without apprehension.

These birds have some notes by which their presence is frequently betrayed; these sound much like the touch of steel upon a grinding wheel. Redwings may easily be preserved alive if kept in a large aviary, and soon become tame and sociable; they are lively and clean, but it is to be presumed that they do not exert, when caged, the powers of singing that they are said so eminently to display in a wild state, since Bechstein, who speaks of keeping them for several years in confinement, does not appear at all conscious of their vocal powers, which have, on the other hand, been so much admired by persons who have heard these birds to advantage among their native woods during the summer season.

While in this country, their food is observed to consist of worms, slugs, beetles, and other insects and their larvæ, which they seek in woods and moist places, and in low meadow-lands, where they may be observed carefully seeking for them among the fallen leaves; they also eat berries occasionally.

The Redwing is more tender than the other species of migratory thrushes; and on the first approach of severe wea-

ther, leaves England for countries situated still further to the south, whence it does not return to us before February or March, about which time it may again be seen in vast flights, travelling onwards towards its native forests in a north-easterly direction.

Redwings breed in Norway and Sweden, Poland, Russia, and Iceland, preferring woods of the alder, or birch-tree: their nests are placed among thick foliage, and are said to be similar to that of the song thrush. Some authorities also state, that the eggs of the Redwing resemble those of the song thrush in colour and markings, although inferior in size: while others describe them as more like those of the missel thrush; in which latter opinion we are supported by the British Museum, which possesses a solitary specimen, from which our drawing and plate were taken.

The Redwing is said to produce two broods in the year.

The whole of the upper plumage of the Redwing, including the wings and tail, is olive-brown: from the base of the beak a pale rufous-yellow band passes over the eye and extends backwards towards the nape; beneath this, a dark streak, following the same direction, passes, as it were, through the eye; the cheeks are dusky, with paler shafts to the feathers, and are bounded below by a yellowish-white band, which passes from the base of the bill to the back of the ear-coverts; below this line is a patch of bright rufous on the sides of the neck, mottled with brown; all the under-parts, as the chin, throat, breast, belly, and vent, are pure white, beautifully spotted with angular and drop-shaped marks of a dark olive-brown colour. The beak is dusky, the basal half of the lower mandible and the corners of the mouth are yellow. From the base of the lower mandible, on each side of the throat, descends a continued line of spots, so dark and closely set as to form a triangular-shaped patch below the ear-coverts; a little band of the same

spots crosses the middle of the throat, leaving the chin and upper part of the breast pure white. The under surface of the wings and tail are pearl grey. The under coverts of the wings and flanks are richly dyed with a bright rufous-colour; from whence its popular name of Redwing is derived.

The legs are yellowish flesh-red, the soles of the feet yellow. The iris is dark-brown; the eye-lid is reddish-grey in the winter, yellowish in the spring.

The male and female are very nearly alike, but the colours of the female are not so distinct.

The Redwing measures about eight inches in length.

The egg No. 50 is that of the Redwing.

Pl. 51.

INSESSORES.
DENTIROSTRES. *MERULIDÆ.*

PLATE LI.

BLACKBIRD.

MERULA VULGARIS.

MORE shy than the missel and song thrush, the Blackbird, although a frequenter of gardens and orchards, is generally only seen in the act of flight, hurrying with guilty haste to escape from observation, conscious perhaps of some deed of pilfering in which it has just been engaged; for with all our partiality for this delightful singer, we must acknowledge that our cherries, currants, and raspberries have not a more determined enemy. As soon as it is light these pilferers commence their work, delighting us, however, at intervals, as if to make amends, with their sweet melody.

Shy in its disposition and solitary in its habits, this bird conceals itself in thickets, brushwood, and clumps of evergreens, which its short wings enable it to thread with ease and celerity. Moist woods, and tangled copses by the river side, or, in winter, springy places are much sought for, as affording worms, slugs, and other ground insects, in which this bird delights. Whenever it ventures from the shelter of these retired spots it flies with haste and precipitation; and its colouring is so out of harmony with all surrounding objects as to render it of conspicuous appearance. In a snow-scene only is its shining black plumage seen to advantage, there it is truly picturesque. When

on the ground the Blackbird runs lightly, and looks timidly about, and while searching for worms and other ground insects, frequently raises and depresses its tail with sudden jerks, accompanied by a lateral expansion of the tail-feathers.

The song of this species is less varied than that of the song thrush, but the tones are rich, soft, and mellow. It is said not to sing so early in the year as some other of our *Merulidæ*. Bechstein considers its period of singing in a wild state to be restricted to spring and summer months, commencing with March, but when caged it sings nearly all the year.

The food of the Blackbird varies with the season, and consists in spring and summer of insects and fruits; in autumn and winter berries form great part of their subsistence, together with the larvæ of insects, which they seek for beneath dead leaves or in moist and shady places.

The Blackbird is usually seen alone, and never associates in flocks; the parents and the young family are only seen together for a short period after the latter quit the nest, and then disperse. They are quarrelsome in disposition, and in spring the male bird is very jealous of the approach of any other of the feathered race to the locality he has chosen for himself.

The Blackbird is an early breeder, often preceding the song thrush. Its nest is erected about three or four feet from the ground in a whin or thorn-bush, in copse or hedge-rows, and formed much like that of the missel thrush, as far as regards the interior lining of grass and the wall of clay, but the outside is less ornamented with moss and lichens. In the specimen before us, the exterior is interwoven with dry fern, the stalks of grasses, and a little green moss; the inside mattress, which is two inches thick in some parts, consists of finer grasses mixed with skeleton holly leaves. We have seen the nest of a Blackbird so neatly embedded in a

bank that it could only be detected when the bird had flown off, by the form of the circular orifice; the rim or border of the nest not rising above the surrounding surface of the bank.

Five is the usual number of the Blackbird's eggs, and the colour is pale greenish-blue, speckled with reddish-brown. In preserved specimens the blue colour soon fades to dirty white.

This species is common throughout the greater part of Europe and Asia, extending as far northward as Norway, and as far southward as Syria. In Germany it remains all the year, contrary to the song and other thrushes, which migrate there in winter.

The Blackbird is about ten inches in length: the wings measure nearly five inches from the carpus to the tip, beyond which the tail extends about two inches and a half.

The entire plumage of the adult male is shining black. The eyelids are bright red-lead; the beak is of a similar colour, shading off to gamboge at the tip: in winter the beak and eyelids are paler and more yellow. The legs and toes are brown; the claws dusky.

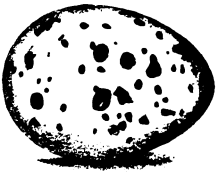
The hen Blackbird has no resemblance in colour to the male: the feathers of all the upper parts are olivaceous dusky, darkest on the rump and tail, palest on the forehead and sides of the neck. The outer webs of the quill and tail-feathers are edged with cinereous brown; the cheeks are dark-brown, with lighter streaks along the shafts. The chin is greyish-white, passing into brownish-rust colour on the upper part of the breast: the under parts of the body are dark cinereous; all the feathers from the chin to the vent are darkest in the centre, forming dusky spots upon the plumage. The beak is dark-brown, with yellowish-brown edges, and the eyelids yellow.

The young nestlings of this species are dusky-brown,

speckled over with ochre-yellow; the beak and feet are reddish-grey, the corners of the mouth and eyelids dirty orange; the young males may be distinguished by their darker plumage. After the first autumnal moult the young male birds nearly resemble the adult, except in the under parts of the body, where the black feathers are broadly bordered with ash-grey, and the adult plumage is not entirely perfected until after the second autumnal change. A beautiful specimen of the white variety of the Blackbird has for some time been an inhabitant of the Zoological Gardens in the Regent's Park. This beautiful little bird appears perfectly inoffensive and gentle; in colour it is of a lovely cream or ivory-white, with reddish beak and orbits.

The egg No. 51 is that of the Blackbird.

49.



50.

51.

Pl. 52.

INSESSORES.
DENTIROSTRES. *MERULIDÆ.*

PLATE LII.

RING OUSEL.

MERULA TORQUATA.

THE RING OUSEL, or Mountain Blackbird, is a native of rocky and mountainous districts, and although it appears to be more common, during summer, in the north than in the south of Europe, we cannot agree with Bechstein that it breeds only in the north. According to the observations of naturalists visiting the north of Europe, it does not penetrate so far as the song thrush. Norway appears to be the limit of its summer residence; and in that country it is seen in great numbers among the barren rocks bordering on the sea-coast. In Sweden it is also found, but in less considerable numbers. In Germany, the Ring Ousel is a common bird in summer, upon the mountainous parts; and it breeds also in Switzerland among the rocks in many elevated districts.

The geographical distribution of this bird appears therefore very extensive during the summer, as it is found to breed throughout Europe from north to south, where the nature of the country is sufficiently mountainous, barren, and wild. The *elevation* of the district appears to be the source of attraction more than the mere temperature that results from latitude; otherwise, these birds would be found in Denmark, Holland, and Prussia, which is not the case;

neither are they recorded to breed in the vast extent of Russia. Following up these views, we naturally look for the Mountain Blackbird in the most mountainous and hilly parts of England, Scotland, and Wales; and we are not disappointed in the search. In Argyleshire, in the range of the Cheviot Hills, in Durham, Cumberland, and Yorkshire; in Derbyshire, and in the mountainous parts of Wales and of Ireland they are well known during the summer season.

The partiality of this species for hilly districts, to which it entirely confines itself during the greater part of the summer, causes it to appear more rare at that season than perhaps is really the case, since there is every probability that the numbers that are seen in autumn upon certain parts of our southern coast have, in fact, been bred in England or Wales, or at most, not farther distant than Scotland.

As soon as the first chills of autumn begin to be felt upon these elevated districts the Ring Ousels descend to the plains surrounding their native hills, and feed upon insects and worms, juniper, mountain ash, and other berries. In France, at this season, they frequent vineyards in like manner, where they commit great depredations. About October these birds commence their journey of retreat towards the south; and it is believed that the greater part of them retire beyond the Mediterranean, and winter in the countries of Africa that border on that sea. Some are seen, however, to remain during this season in Italy. Their migrations are generally performed in pairs, or singly, this bird being of solitary habits and disposition; small flocks are, nevertheless, seen collected, at the period of migration, on the southern coast of our island, as if waiting for a favourable opportunity to pass the Channel; but they do not associate or breed in large companies, like some other members of the thrush tribe.

In its form and general appearance, in its solitary and shy habits, and in its food, the Ring Ousel much resembles its congener, the blackbird: its song also is said to bear great resemblance to that of the blackbird, being melodious and highly agreeable, although its voice does not possess so much power. It has also the same manners and actions, and its call-note resembles the word *tuk*.

When arrived, about May, at its summer rocky destination, this species commences nidification. The manner of its nest, the materials of which it is composed, and the size, number, and appearance of the eggs, also strikingly resemble those of the blackbird, but the site chosen is different; this is always exposed and unprotected, and the nest is placed upon a bank or among the rocks, unsheltered either by bush or herbage.

In adult plumage the Ring Ousel is a bird of handsome and striking appearance, and from its beauty deserves a better reception than it frequently meets with, when descending from its mountain retreat it encounters the merciless eye of the sportsman, who is at that season ready armed for destruction, and whose attention is arrested by the singular appearance of its pure white crescent.

In length this species measures about twelve inches, and eighteen in expanse. The wing is short in proportion to the size of the bird, measuring less than five and a half inches from the carpus to the tip: the first quill-feather is remarkably short, not measuring more than half an inch, the second a little exceeds the fifth, and the third is the longest in the wing: the first three or four quills are much pointed at the extremity. The tarsus measures an inch and a half nearly, the middle toe and claw an inch and a quarter; the outer toe is closely united to the middle one, and the claws of all are laterally compressed and remarkably blunt, from the friction, probably, of the rocks on which they are accus-

tomed to perch. The beak is stout, and the ridge of the upper mandible advances a little upon the forehead: the nostril is large and oval, the base of the beak beset with short but stiff bristles, and the space between the nostril and the eye is covered with closely set hair-like feathering. The beak is notched near the tip, and the upper line of it very gently curved from the base; the tail is four inches in length, and is covered nearly half way down by the folded wings.

In the adult male the crescent-shaped gorget on the breast is pure white, the rest of the plumage dull black, which is darkest on the head, neck, and breast, and palest on the quill-feathers, particularly towards the tips of the primaries. With the exception of the feathers between the bill and eye, and the front of the cheeks, every individual feather is edged with a paler colour. Those of the top of the head, neck, and back are narrowly edged with cinereous ash; the shoulders and feathers of the under parts, as well as those of the wings, are edged rather broader with pale ash-grey. The outer webs of the greater wing-coverts and tertials are also tinged with ash in addition to their edging. The tail feathers are uniform sooty black, with the exception of the outer, which is narrowly edged with pale ash; the under colour of the tail is dark grey, the wings are paler underneath, and the under coverts of the same pale grey mixed with brownish-ash. The beak is horn-coloured, the inside of the mouth and corners of the gape yellow. Both mandibles are yellow at the base in the spring. The iris is dark brown; the eyelid yellow; the legs and feet are dusky with yellowish soles.

The adult bird is more uniformly black in spring, in consequence of the natural wearing off of the edges of the feathers.

The younger the Ring Ousel the more broadly are the feathers edged, and the less clear and distinct is the gorget on the breast.

A fine young male, shot in autumn on Shepperton Range, Middlesex, has the entire upper plumage so broadly edged with olive-grey that very little of the central part of each feather is visible. All the feathers of the wings are dark olive, edged with yellowish white; the under plumage the same, edged with a fainter and narrower border. The chin is white; from thence to the crescent on the breast the feathers are black, bordered with yellowish white, giving a tessellated appearance. The crescent is brownish white, much obscured by a semi-lunar dusky line that each feather bears near the tip: the tail feathers as in the adult. This bird was unknown to the party who shot it, who was a person experienced in local ornithology; a proof of its rarity in this part of the country.

The German name of Drossel, which is in Germany common to this and other species of the thrush tribe, such as ring-drossel, mistel-drossel, &c., we retain only as derived doubtless from our Saxon ancestors, in a local appellation of the song thrush, which is in many parts of the country called the throstle.

The egg figured 52 is that of the Ring Ousel.

PLATE LIII.

GOLDEN ORIOLE.

Oriolus galbula.

From the singular call-note of the Golden Oriole, which we have frequently heard uttered from its wooded retreat, have arisen the divers names bestowed upon this species in various countries. In Holland it is called Willewouw; in Italy, Rigogolo; in France, Loriot; by Bechstein its call-note is likened to the syllables *ye-puhlo!* All these appellations, although sufficiently different from one another in point of lettering, convey nearly the same sound to the ear when pronounced.

This species, although rare in England, is common at some periods of the year in different parts of Europe; it is found in the most wooded parts of Holland, and is still more abundant in Italy and France. In all these countries the Oriole is a migratory bird, which arrives late in the spring, and returns southward at the close of summer, or very early in autumn. In England, although of rare occurrence, many individuals are recorded to have been shot or captured alive at different times, and some instances have been authenticated of its breeding in this country.

Thickly wooded districts, and parks abounding in ancient trees, are preferred by these birds. They are usually seen alone or in pairs, and occasionally in small parties, consisting

Pl. 53.

of the parents and the young family. They are birds of shy and retired disposition, and are rarely seen beyond their wooded tract, where they are generally hidden among the thick foliage. Insects and various fruits, such as cherries, figs, olives, etc. constitute their food.

The nest of this species is singular in materials and construction, and differs from that of all other birds found in Britain. A specimen which we received from Suffolk was suspended from the forked branch of a tree, and is composed almost entirely of wool, interwoven and bound together with long coarse grasses and fine fibrous roots; it is about the size of the blackbird's nest, and of similar shape and depth, containing four eggs: this nest is remarkably light and very beautiful.

These birds begin very early their southern migration: they leave Holland and Germany in August: it is therefore probable that their journey being commenced so early, is continued to a very remote part of Africa, where they join their brethren of African descent, and other tropical birds.

The season of moulting also argues a very distant southern migration, as it takes place in February in caged specimens, from which we may naturally infer that in a wild state they pass through that change within the tropics, if not even in the southern hemisphere, where the seasons are in opposition to our own.

Caged birds of this species betray great restlessness at the period of migration during many weeks in spring and autumn. The song of the Golden Oriole is extremely pleasing; it is also capable of instruction in confinement. Young birds may be reared from the nest by feeding them on ants' eggs and other insects, raw meat well chopped, and occasionally bread and milk, but they require a great deal of care and attention.

Most of the specimens of this species recorded to have

been taken in England have been met with on the eastern or southern coast, but it sometimes penetrates more inland; we have ourselves seen it on Burwood Common, near Walton on Thames, in Surrey. This individual, a fine male in perfect golden plumage, was seated upon the branch of a tree by the road side; it was probably on its migration, or it would not have shown itself so openly: on being approached the bird flew across a field, where we had a full view of it, and finally eluded pursuit. In the same locality, we remember to have heard some years previously the call-note of this species, but were not able to get a sight of the bird.

The genus *Oriolus* of Temminck, which that author has separated from certain American species nearly allied, is thus characterised:—Beak in form of a lengthened cone, flattened at the base, laterally compressed near the tip; upper mandible nearly straight at the base, gently arched towards the tip, and bearing a prominent ridge along the upper line, toothed near the extremity; nostrils basal, lateral, naked, and horizontally pierced in a large membrane; tarsus shorter than, or equal to the middle toe; wings having the first quill very short, the second shorter than the third, which is the longest.

The Oriole measures about nine inches and a half in length, and eighteen in expanse. The tail is about three inches and a half long, the feathers nearly even at the end, and the wings, when at rest, cover three-fourths of its length. The beak is nearly an inch long, and about five lines broad at the base. The nostril oval. The colour of the beak varies from pale reddish-brown to dull black, according to age or sex.

The entire body of the adult male is brilliant yellow, including the head, neck, and tippet, the breast, and all the under parts. The wings and tail are black, with the exception of the tips of the spurious wing feathers, which are yellow, and of the terminal portion of most of the side fea-

thers of the tail, which are also yellow; the quill-feathers are narrowly bordered with white: the two middle feathers of the tail are black. A black line passes from the base of the beak to the eye. The iris is carmine-red; the beak bright reddish brown. The legs and feet are ash-colour.

The female is olive-green on all the upper parts of the body, the under parts greyish-white, the shafts of the feathers dusky: flanks yellowish, streaked with brown. The tail-feathers are dark olive, those on the sides tipped with yellow; the upper tail-coverts tipped with yellow. The wings and wing-coverts brown. The beak browner than in the male.

The young birds much resemble the female, with the addition of dark shafts to the feathers of the upper plumage; their iris and beak are dusky.

The egg of the Golden Oriole is numbered 53.

PLATE LIV.

WHEAT-EAR.

SAXICOLA ŒNANTHE.

THE numerous family of the *Sylviadæ*, the last of the divisions of the *Dentirostres* previously mentioned, embraces nearly forty native British species, some permanently resident among us, some migratory. By various authors this large family has been as variously divided and subdivided, in accordance with their different views.

At the head of the *Sylviadæ* has been placed by some recent authors the genus *Saxicola*, on account of the affinity which its members have with the rock thrushes among the *Merulidæ*, and as forming a proper connecting link between that division of the *Dentirostres* and the summer warblers, of which the *Sylviadæ* chiefly consists.

Waste and barren districts, open downs and moors are the chief resort of most of the birds included in the genus *Saxicola*. They are lively, shy, and difficult of approach, except during the breeding season. Their food consists entirely of insects, which they take after the manner of the flycatchers, by darting upon them from the summit of a hillock, stone, or bush, or by pursuing them on the ground, which they are enabled to do with much celerity on account of their long and slender legs. All the species at present known are confined to the ancient Continent. The few

Pl. 54.

members of this family that are reckoned British, which are only three, are readily distinguishable by their peculiar manners. In form they are stout, and the shortness of the tail adds to that appearance; and their heads are rather thick and round; but their long and very slender legs, and the sprightliness of their actions, give them a peculiar character. They are continually flitting from bush to bush, or from stone to stone, and when alighting to rest and gaze about, the tail is continually in motion. They are birds of handsome and varied plumage, and the young and old, male and female, in spring and autumn plumage, all present different appearances.

The Wheat-ear is a summer resident in these islands, and although too local in its distribution to be called common, is yet, in many places, very numerously dispersed. In spring and autumn, the periods of their arrival and departure, they are found in immense numbers on some parts of the southern coast, especially in the counties of Dorset and Sussex: the greater part of these are supposed to be winging their flight to or from the northern parts of Europe, as they penetrate even beyond the limits of the arctic circle.

This species is much attached to barren, stony, and rocky wastes, and seldom seen in wooded or enclosed country, unless in the immediate neighbourhood of a heath or elevated moor. Their time of arrival in England is from the middle to the end of March, according to the season. A friend, writing from Suffolk, says: "Several pairs of Wheat-ears were observed to-day, March 30th, on the smooth declivities of Saxtead bottom. One solitary individual made its appearance on the 21st instant, during the late inclement snowy weather, but from that period not any more arrived here, or at least were not visible until this day, when considerable numbers were seen to frequent their favourite spot. It has been remarked, that these birds arrive as they depart,

one or two only in company, but in the above instance they evidently seemed to come in a body, since we have constantly looked for their arrival each day, even preceding the 21st, and none were to be found in their usual haunts." Montagu appears also to have entertained the same opinion, and he thus describes the arrival of a party from their passage across the Channel: "On the 24th of March, 1804, a vast number of these birds made their first appearance on the south coast of Devon, near Kingsbridge, in a low, sheltered situation, and continued in flock the whole of the day, busied in search of food: the flock consisted entirely of males, without a single female among them. For some time the wind had been fluctuating, and the weather cold, attended with hail and snow, for a day or two preceeding their appearance; and a strong gale of wind from the east obliged these birds to make a landing so much farther to the westward than usual in such numbers. The Wheat-ear is by no means common in Devonshire or Cornwall in the breeding-season, and never plentiful in either during the migrative seasons, but is most frequently observed on the fallow lands in the autumn."

In allusion to the peculiar localities chosen by this species, the friend before quoted says, "Wheat-ears are found partially dispersed on many parts of our heaths, but one spot in particular seems selected as their most chosen resort. This, their favourite valley, consists of a smooth grassy slope, the ground beyond rising abruptly in the opposite direction; it is much frequented by rabbits, and abounding with their burrows, so as to afford every facility for the convenience and peculiar mode of nesting adopted by these birds."

"The nest of this species is constructed of moss and grass, intermixed with wool, and lined with that material, or rather, if it can be obtained, with hair. The eggs weigh about forty grains." The nest is usually constructed in the recesses of a rabbit's burrow, or in a crevice among the rocks, and is often

difficult to find, and when discovered still more difficult to obtain. The eggs are usually six in number.

The Wheat-ear moves with a smooth and rapid flight; it is never seen to alight upon a tree, rarely upon a low bush or hedge; but generally rests itself upon a hillock or mole-heap, on a stone or embankment. It is a careful, and watchful bird, and when perched as just described, frequently turns its head to the right and left, when the black stroke which passes through the eye forming a horizontal line with the dark beak, forms a very distinctive character. It is continually on the alert, and on the least alarm flits away. It is only under cover of a hedge or bank that an observer can approach within a few feet of it.

The song of the Wheat-ear is varied, soft, and pleasing, and frequently continued uninterruptedly for a considerable time, and in the breeding season is sometimes uttered when hovering on the wing. When caged, it is said to sing almost throughout the year.

In Sussex and other counties, where these birds abound in such vast numbers at the periods of their migration, they are taken in traps for the table, and being at that time in excellent condition, are esteemed very delicious eating. In September they begin to retire from this country, and great numbers assemble on the downs of the southern coast for that purpose: nevertheless, stragglers are occasionally seen much later in the season, some having been noticed in November and December.

We have seen this bird in Surrey during the breeding season in various open situations suited to its habits, such as Box Hill and its vicinity, St. George's Hill, Burwood Common, etc., and on the open level plains also in Middlesex that border on the Thames we have observed large parties resting during their autumnal migration, at which time the greater part of them were in their autumn or rufous feathering.

The Wheat-ear is known in most countries of Europe, from the coasts of the Mediterranean to the arctic circle, but is most common in the temperate parts. Barren and uncultivated districts appear to attach these birds most; also open downs near the sea, on which latter account they are very abundant in Holland.

This species confines itself entirely to insect food, such as the many species of flies that abound on dry and heathy wastes, also grasshoppers, beetles, the larvæ of insects, etc.

These lively birds may be kept in confinement if care is taken to supply them as much as possible with insects, but in default of these, bread and milk, bruised hempseed, and raw meat have been found to answer the purpose. They require in other respects the same warmth and treatment as the nightingale.

The entire length of the Wheat-ear is six and a half inches: the wing measures three inches and a half, beyond which the tail extends about nine lines. The tarsus is an inch long, black, slender, and covered from the ankle to the feathered tibia with one plate, not divided into scales. The middle toe is nine lines, the side-toes little more than half that length, the outer one united half-way down to the middle toe; the claws are black, very slender and sharp; the tail measures two inches; the beak is five and a half lines from the forehead to the tip, and nine lines from the tip to the gape. The beak of this species is intermediate in form between the stoutness of the thrushes and the slenderness of the warblers; the upper mandible is slightly notched, much compressed towards the tip, and somewhat widened at the base, resembling the Muscicapidæ, and is, like them, furnished with a few stout bristles near the gape, and has a strong prominent ridge running along the upper mandible, and advancing upon the forehead. The wing has the first quill-feather about half an inch in length, the

second a little shorter than the third and fourth, which are the longest, and nearly equal in length.

The distinct and well-contrasted colours of the adult male bird of this species, in summer plumage, are disposed as follows: the head, mantle, and upper part of the back are fine bluish grey; the wings and wing coverts are black; the beak is black, and a narrow streak of the same passes from the nostril, skirts the eye above and below, and expands over the ear, above which a band of white crosses the forehead, and passes over the eyes; the chin is also white; the lower part of the back and upper coverts of the tail are pure white, as well as the side feathers of the tail for two thirds of their length, commencing at the base, the remaining third part being black; on the two centre feathers of the tail the black portion reaches higher up; the lower part of the breast, belly, and under tail-coverts are white, slightly tinged with yellow ochre; the iris is hazel; the eyelids, legs, and feet are black.

The autumn colouring of the adult male differs considerably from that of the spring. At the autumnal moult the white of the under parts is exchanged for bright rufous on the breast and sides of the neck, and pale rufous white on the chin, belly, and under-coverts of the tail; the grey of the upper plumage is obscured with brown, and the wing-coverts and tertials are broadly bordered with rufous brown, the tail-feathers are also narrowly tipped with pure white. These two states of plumage are represented in the plate, and the change from the autumn to the spring, or summer plumage, is effected by the gradual wearing away of the edges of the feathers, and by the effect of season on the bird itself, not by a vernal moult, as these birds cast their feathers only in the autumn.

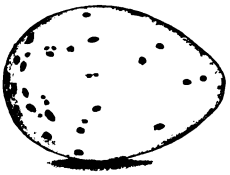
The spring plumage of the adult female differs not very materially from that of the male; the black, white, and grey,

are, however, much less pure, and the dark streak through the eye brown, and not so well defined.

Young birds of the year in autumn very much resemble their parents when obscured by the autumnal moult, but the line over the eye is rufous instead of white, and the dark line through it very imperfect; the head, back of the neck, and mantle also have, at present, none of the grey feathering; they are chestnut-brown.

The egg figured 54 is that of the Wheat-ear.

52.



53.

54.

Pl. 56.

PLATE LV.

WHINCHAT.

SAXICOLA RUBETRA.

THE arrival of this shy and timid bird in our country seldom takes place until nearly a month later than that of many of our summer visitors. According to the information of a friend, curious in such observations, its appearance on the coast of Suffolk varies from the 18th of April to the 6th of May, according to the season.

Whinchats are found dispersed generally, but not very abundantly, upon upland heaths and commons, and delight in warm, still, dry weather; but usually remain concealed in some sheltered spot, if the temperature is low, or the wind boisterous. They are more impatient of cold than many of our summer migrants; this is apparent by their late arrival, which is several weeks after the spring passage of the previous species, the wheatear.

In its actions this bird is light and graceful in a great degree. It perches usually upon the uppermost branches of the whin and furze bushes, and other low shrubs, with which the spots most frequented by it abound: in such a conspicuous situation it may be observed, seated for many minutes at a time, quite motionless, except when the head is turned to the right or left from time to time to watch for its insect food, or to observe whether any danger ap-

proaches. If followed, it takes flight, and skimming near the ground, again alights similarly upon the top of another bush a little in advance of the pursuer. Although usually shy, and flying from the approach of man, these little birds, during the time when they have young, either in the nest or just able to fly, are very fearless whenever their nest is approached, flying round and round the intruder, apparently in great agitation; it is, however, difficult to ascertain behind which bush or clod their treasure is secreted, as they are careful not to betray it by alighting upon the spot; we have frequently, on such occasions, sought for it in vain, although, from the restlessness and distress of the parent birds, we were quite certain that the little ones were not far off.

The form of this little bird is elegant, and the plumage of the adult male in spring is prettily varied with black-white, grey, and pale rufous: the dark horizontal line through the eye, the white streak above it, and the white spaces upon the basal half of the tail-feathers, are sufficient marks to render it readily distinguishable by even the inexperienced observer.

The food of this species, in a natural state, is almost entirely insects, such as flies, bees, beetles, caterpillars, &c., some of which are taken by darting upon them from a bush or bank, others are sought for and pursued upon the ground, which they traverse with lightness and celerity.

Arriving so late in this country, and departing proportionably early, it is probable that only one brood of nestlings is reared by the Whinchat during the year, although we have found its nest and eggs as early as the 17th of May. The nest of this species is usually built on or near the ground, either in the thick branches of a tuft of heath or furze, or among tall herbage, or concealed behind a clod of earth. Its component parts differ according to the locality

in which it is found. One of our specimens, which was taken from a low bank in a district of meadow land, is composed almost entirely of small tufts of dry grass, such as are usually to be seen scattered in meadows that are much frequented by rooks; a little green moss is interwoven externally, and a few cow's hairs are perceptible in the substance of the nest, but not disposed so as to form a lining: the whole constitutes a thick and elastic mattrass of a flattish form, the cup, or hollow, of the nest being very shallow. This nest was not so well concealed as is usually the case, and the hen bird was surprised and taken prisoner with it, together with four eggs. Another of our nests is entirely different in the materials of which it is composed; these consist of green moss laid upon a foundation of a few dry stalks of heath; some skeleton leaves of the black poplar, whose stiff and seemingly unmanageable foot-stalks form the basket-work; and two or three long horse-hairs.

The eggs, which are from five to seven in number, resemble very much, in size and form, those of the redbreast; they are delicate greenish-blue, more inclining to green than those of the wheatear, and are always speckled more or less with pale orange-brown about the larger end. The young birds, in their nestling plumage, are mottled with grey and white, but when fully fledged they bear much resemblance to the adult female in autumn feathering.

One evening, in the summer of 1841, we watched for some time a young family of this species on Shepperton Range, a tract of open meadow land on the borders of the Thames, in Middlesex, a spot much frequented by these birds. The young ones had probably come out for their first flight, as we had not seen them previously, although the place was daily visited by us. They flew, by short flights, from bush to hedge, and from hedge to railing, fanning their short tails, and occasionally settling on the

ground. They were anxiously attended by the parent birds, who showed no disposition to leave them. We did our best to secure one or two of them, but although they could not fly more than a few yards in a flight, they were too nimble for us, and kept themselves safely out of our reach.

The flight of these birds is light and springing; and they hover with a quick motion of the wings, rising a few feet above the bushes, and singing at the same time their pleasing song. In a cage, their flight from perch to perch is light and noiseless, and performed with so quick a motion, that the wings, when in the act of fluttering, are not perceptible.

This species is met with in most of the temperate parts of Europe, where heaths and fertile districts abound, reaching, in summer, as far north as the centre of Russia. It is found in Norway, Sweden, Denmark, Germany, and France; in Greece, Italy, and Spain. In Switzerland it is very common, especially in fertile valleys that border upon Alpine districts; it even ascends the mountains to a considerable elevation, where the soil is well covered with verdure. In all these countries it is a summer resident only, and very early in autumn retires southward.

The adult birds are very handsome in plumage, especially the male in his full spring dress. The beak and the long slender legs are black, and polished like ivory, the base of the beak beset with bristles. The feathers of the whole upper plumage from the beak to the tail are dark brown in the centre, bordered on the head and on the lower part of the back with orange brown; the intermediate parts, including the back and mantle, have the feathers bordered on the sides with delicate grey. From the beak a dark line extends backwards, covering the ears; above the eyes, and extending to the nape, runs a line of pure white; another narrower line of white passes from the corner of the mouth down the side

of the face, separating the dark ear-coverts from the delicate pale orange of the throat and breast; the rest of the under-parts are pale buff. The entire wing is of dark brown feathers, bordered with orange-brown, with the exception of some of the greater coverts towards the body, which are pure white; another patch of white occupies the base of the coverts of the primary quills. The tail, which is very short, and extends less than half an inch beyond the wings, has the basal half of its feathers white, the terminal half dusky, bordered with pale brown.

The female bears much resemblance to the male in the distribution of her colours; the different tints are not, however, so pure and distinct, and the white patches are of less extent.

The young birds are far inferior in beauty to the adult in spring; they have neither the white lines and patches, nor the well-defined dark band through the eye, nor the beautiful grey upon the back; their entire upper plumage is dull yellowish-brown, streaked longitudinally with dark brown, the tips of many of the feathers paler; the ear-coverts are pale and ill defined, and the streaks above and below them dirty brown; no white is yet to be observed upon the plumage, except at the basal part of the feathers of the tail.

The length of this species is a little more than five inches. The wing, from the carpus to the tip, measures two inches seven lines; the first quill-feather is less than an inch in length; the third and fourth are nearly equal, and are the longest in the wing. The tarsus measures about nine lines, the middle toe the same; the claws are long, slender, and remarkably sharp. The beak is four lines from the forehead to the tip, and seven from the tip to the gape.

The egg of the Whinchat figured in our plate is No. 55.

the ground, and again rising to gain the elevation of a low bush or bank, thus tracing in its flight inverted arches; but if disturbed when it has nestlings, it flies higher, and with a more continued flight. This we observed one evening to great advantage, when we accidentally intruded ourselves upon them. It was in a small sheltered valley among the hills, whose sides were covered with heath and brakes. We had no sooner sat down to enjoy the beauty of the evening, than a pair of these birds hurried past us in much agitation, uttering notes that were doubtless understood as signals of alarm by others of their species. Presently, another and another pair took wing, and hurried about the little valley, testifying by all their actions great disturbance and distress. We had entered the place to watch the evening sports of the nightjar, quite guiltless of any intention of molesting or disturbing these pretty birds, and were much interested in their proceedings. As the gloom of evening deepened, we could only perceive them, as they flew hastily past, somewhat above our heads, by the white patches upon their plumage, which, contrasted with the dark sides of the valley, shone out in the gloom. As long as we remained there they took no rest, but continually passed and repassed us, sweeping to the end of the valley and returning, plainly pointing us out as the causes of their distress.

Although the vicinity of their nest is generally thus betrayed by the Stonechats, it is nevertheless difficult to find, as it is very closely concealed, and the birds never visit it when they think themselves observed. The nest is constructed either on the ground beneath a bush, or tuft of heath, or in the centre of a close whin-bush, and well concealed. We have met with it in the latter situation; and should have been unable to find it had not one of the old birds flown out on our approaching the bush hastily. The sight of the bird induced us to look for the nest, which was

not found until after a considerable search, and much annoyance to our fingers, so well and deeply was it concealed: it was about two feet from the ground, and contained four eggs. This nest was composed almost entirely of green moss and roots, laid upon a rough foundation of dry twigs of heath.

The nest of this bird is, however, mostly built of short tufts of dry grass, fine and loose roots, and other disjointed and very anomalous portions of vegetable rubbish, together with a few horse-hairs; it is a rough and loose structure, and when complete has neither lining nor border. In all the nests we have seen of this species where horse-hairs were present, they have been singularly made use of, not being employed as a lining, but either woven into the loose substance of the nest, or used outside to bind the whole together, being, in fact, the most substantial material employed. But in denying the Stonechats the praise of skill in the architecture of their nests, we cannot but admire their industry in accumulating so large a quantity of materials together.

The eggs of this species, which vary from five to seven in number, are generally smaller than those of the whinchat, more pointed in form, and more polished in substance. In colour they are usually light greenish-grey, blushed over with a tinge of reddish brown, which consists of minute spots most obvious at the larger end, where they sometimes form a distinct zone.

The young birds in their first, or nestling plumage, are mottled with greyish-white.

The food of the Stonechat consists chiefly of insects, aërial and terrestrial. In the autumn they eat caterpillars, and in winter frequent springs and the borders of rivers, where insects are usually to be found.

These birds roost upon the ground, and are sometimes taken by bird-catchers in their nets. When first taken prisoners, their wings should be tied together at the tips

to prevent their fluttering violently about, or they will exhaust themselves with their angry endeavours to escape. Not many succeed when taken full-grown: it is better to rear them from the nest, which may be done with care: they require to be fed in the same manner as the wheatear.

The entire length of the Stonechat is five inches and a half. The beak measures four lines and a half from the forehead to the tip: it is black, and furnished at the base with bristles: the eyelid is black, the iris dusky. The whole of the head and neck are black: a patch of pure white occupies the space between the ear-coverts and the shoulders: the greater coverts of the tertials are white, as well as some of the upper coverts of the tail. The rest of the upper plumage is black, bordered with rust-colour, the quill-feathers of the wings and tail the same. The breast is rich, bright rust-colour, becoming lighter towards the belly and under tail-coverts. The tarsi measure eleven lines; these and the toes are black and polished, the claws very sharp. The wing measures from the carpus to the tip two inches eight lines: the first quill-feather is less than an inch long, the second four lines shorter than the third and fourth, which are the longest. This is the description of the adult male in its summer feathering.

After the autumnal moult the black feathers of the head and neck are bordered with a fringe of rufous, which is still broader upon the feathers of the back and scapulars, and the breast is not so intense in colour.

The female has the upper parts of the body brown, bordered with yellowish rust-colour: the throat is dusky, intermixed with white and black. There is a white spot, as in the male, upon the greater coverts of the wings, and also upon the side of the neck. The under parts are brownish-rufous, darkest upon the breast.

The egg of the Stonechat is figured 56 in the plate.

PLATE LVII.

REDBREAST.

SYLVIA RUBECULA.

THE warblers upon which we are now entering are, without doubt, the most interesting of all the feathered tribes, and the most general favourites on account of their pleasing and lively manners, and their various and delightful powers of song. In summer all nature is full of them. Some species inhabit our gardens: others, less familiar, confine themselves to the tufted banks of brooks and rivers: many reside chiefly on the skirts of woods and heaths; and a few penetrate into the recesses of the forest. Everywhere we find these lovely and gifted little creatures; everywhere the ear is charmed with their melody, or the eye gratified by the sight of their light and graceful forms. They differ much in habits, locality, and manners. Some thread their nimble way hardly perceived through the thick and tangled hedge; some climb among the reeds and osiers; some are seen swelling their little throats as in ecstasy they pour forth notes of gladness; and others, unseen, warble their delicate and varied song from a close and quiet shelter. Many of the members of this interesting family are familiar in their approaches to us, building their nests and bringing up their young within our sight; while others are little known but to the naturalist, who seeks them in the retired spots to which their instinct leads them for security. Some of these little

Pl 57.

vocalists sing during the night, others only in the day, each, in its appointed time, joining in the unceasing chorus of Nature; and when the greater number leave our climate in autumn, to seek a milder temperature, a few remain to cheer our leafless gardens. To the lover of nature all these changes are endless sources of the purest pleasure, and subjects of the most delightful investigation, to which the diligent seeker of worldly pleasure can find no equivalent.

The *Sylviadæ* have many generic characters in common in their external formation; but, on account of slight variations in form, and differences of habits and manners, this large family is by most systematists subdivided into several sections, which will be mentioned in their order. The generic characters usually assigned to the *Sylviadæ* are as follows:—Bill straight, slender, and almost round, higher at the base than broad: nostrils placed near the base of the bill, oval, and partly closed by a membrane. Tarsi usually longer than the middle toe; the outer and middle toes connected: the claw of the hinder much arched, and shorter than the toe. Wings of middle size; the first quill-feather short or wanting, the second a very little shorter than the third. They bear much resemblance to the thrushes, except in size. The birds of this family are lively and nimble, but unsociable, even among themselves. The male birds are possessed of the power of singing, in a manner more or less agreeable. Their food consists of insects and their larvæ, berries, and worms. They breed in woods and forests, on or near the ground, in thickets and reeds, in holes of trees or rocks: they have one brood in the year, at most two. They deposit from five to seven eggs, which are hatched in a fortnight. The young desert the nest early, and even before they can fly. In the Redbreast, genus *Erithaca* of Swainson, the bill is rather strong, furnished with a few bristly hairs at the corners of the gape: the

nostrils nearly covered by hairs projecting forwards. The claws are very blunt, plainly indicating that it passes great part of its time upon the ground.

The Redbreast is remarkable for its familiarity and confidence, its liveliness, and the beauty of its untiring song. Of all our small birds it is the most interesting; its enchanting grace, its sociability and confiding dependence upon our good will, claim for it the first place in our affections, which, indeed, it generally obtains. In the qualities of its song some few birds may rank above it, such as the Nightingale and Blackcap, but the Robin enlivens us at all seasons, not only in the height of summer, when all nature is joyful, but, in the most dreary and gloomy days of November and December, when other birds are mournful and silent, this sweet warbler may sometimes be heard to pour forth his plaintive melody, as if to bring more forcibly to our minds that he is the best friend who is faithful in adversity.

In a natural state, the Redbreast sings the whole year, except during the time when the young nestlings require close attention: this period is no sooner past than its song is recommenced, and is not again relinquished until another year brings with it a recurrence of the same duties. The song commences in the morning with the earliest dawn, and is often heard late in the evening, especially in the latter part of summer, until nearly dark. We had a caged Redbreast, a great favourite, which always began to sing in the evening, as soon as the candles were brought in. If there was music, of which he was particularly fond, he would sometimes sing so loud that we were obliged to throw a covering over his cage, in order to keep him quiet. At other times, when not excited by rivalry, his voice was soft and delightful, and sometimes so low as to be inaudible at the distance of a few feet from the cage. The Redbreast, when caged, is very wakeful, and can seldom be surprised with its head behind its wing.

Although so friendly with man, this bird is generally unsociable with individuals of his own species, whether at large or confined in a cage: under both circumstances, they are frequently seen to fight. We have, however, found the Redbreast very peaceable when confined with small birds of different species, and have frequently kept him in a cage with nearly twenty others. It is supposed, also, that, in migrating, Redbreasts travel singly, as they have occasionally been seen alone at some distance from land. In a communication from the Rev. E. J. Moor, that gentleman says: "A young naval friend of mine (Mr. R. Burroughes) told me that as his ship was once in the Bay of Biscay, at a considerable distance from any land, a common Robin Redbreast was picked up one morning on the deck, weak and wounded; it had been driven against a mast of the ship in the night, which was rough and squally. The bird was attended to, and recovered, and continued with the vessel until she reached Bengal, where it was taken to land and liberated. It used to fly about the rigging, and come down on the deck to be fed. Mr. Burroughes added, that it was highly curious to see the Robin preparing to shelter itself about the different parts of the rigging, &c., upon the approach of any coarse weather."

Although very sensible on most other subjects, these birds very readily fall into a snare or trap; one is no sooner caught than all the Redbreasts within hearing come around to see what is the matter, so unbounded is their curiosity; and one after another may be caught in the same manner by leaving one bird in the trap-cage to allure the rest. But although it falls into a snare with such incautious precipitation, the Redbreast is not so easily accustomed to a cage as many other birds; and, unless taken at a suitable season of the year, flags and dies after a few days' captivity. It bears the loss of its liberty best in the winter; and we have kept individuals taken

at that season for years. In a cage, it is the most interesting and sensible of all birds; it is always active and lively, and watchful of all that passes. If a new bird is put into the cage, or aviary it inhabits, the Robin is the first that takes notice of it, and immediately approaching, utters its note of surprise, bows repeatedly with its peculiar dipping motion, erects its tail, and in various ways endeavours to express its interest or surprise. Its attention is particularly directed to young nestlings, either of its own or other species.

The food of this species consists of insects of all sorts, and earthworms, of which they devour great quantities; these are sometimes shaken or beaten till motionless, but often swallowed alive; elderberries and blackberries are also eaten with much relish. Beetles and earwigs are likewise a favourite food; the former are held in the claw, in the manner practised by the hawk tribe, and picked in pieces, having previously been twitched and tossed about until apparently dead. After eating food of this kind, Redbreasts cast, or throw up, the indigestible remains, such as the elytra of beetles, the wings of flies, etc. A young friend once informed us that, walking in a road enclosed with trees, he had observed one of the large beetles, commonly known as the stag beetle, sailing in the air across his path; suddenly, a Redbreast darted towards it, and the two creatures met in the air, and by the force of the shock fell together to the ground. The young narrator said he watched them for a few moments struggling together upon the ground; when, fearing for the life of the Robin from the formidable jaws of such an adversary, he could not help running towards them, upon which the Redbreast flew off. The collision might have been accidental, but from the well-known boldness of the Redbreast, and the circumstance of his being sufficiently at liberty to fly off when approached, it would appear as if he had been the aggressor, and had met this formidable insect with deadly intentions.

Our island appears to be the most northern country in which this species remains during the winter. In Saxony, which is in the same parallel of latitude as our most southern counties, these birds are only summer visitors, arriving in March and departing in November, never remaining the whole winter with impunity.

That some Redbreasts of northern origin pass the winter in this country, we have long thought probable, from the great increase to their numbers which is generally to be observed as soon as the cold weather sets in. At the present season, November, when our gardens and orchards are more frequented by Redbreasts than at any other period of the year, we have listened with surprise to the great numbers that may still be heard singing in the open country. On the 14th of this month, a day warm and fine, but which had been preceded by a short period of cold weather, we were strengthened in the belief that our native Redbreasts are sometimes joined by a foreign migration, by listening, in a well-wooded district, to the innumerable songsters of this species that were to be heard all around. The day was still and warm, and their little voices could be heard from a great distance, from tree, and hill, and valley, as they answered one another in joyous response. Why should they not in this country as in others obey the great law of nature for their comfort and preservation, and why should not England serve as a winter asylum to many of this species that have been reared more northward? Especially as there appears something in the climate of England congenial to these birds. Probably the cause may be referred to the constant changes in the atmosphere, which prevent the temperature from continuing very low for many days together.

The Redbreast begins to breed early, nearly as early as the hedge-sparrow, and often while the snow is still upon the ground. The same memorandum in a friend's manuscript

journal, dated April the 7th, records: "A heavy snow storm at six o'clock in the morning," and "a Robin's nest in the garden, with young ones."

The nest of this species varies as much in the materials of which it is composed, as in the situation chosen. We have one taken in the month of April from the interior of the roof of a cow-shed, after the young birds were flown, which is almost entirely constructed, within and without, of cows' hair, of a rufous, or reddish colour; a very little green moss can be detected interwoven in the foundation, together with a few roots. The whole has the most singular appearance, and bears no resemblance at all to an ordinary Robin's nest. Another of our specimens, formed of the materials most in use with this species, is chiefly composed of green moss, bound together with leaves of the holly and black poplar, both in the beautiful reticulated or skeleton state, and the inside is lined with delicate white roots, and a few horse-hairs. This is as usual a large and rather deep nest, and its substantial sides are not less than two inches in thickness: it contained when brought to us seven eggs. The eggs of this species are oval in shape; in colour they are yellowish-white, speckled with brownish or Venetian-red, chiefly at the larger end.

The Redbreast is generally diffused throughout England, wherever wooded country abounds, or fields, hedges, plantations, gardens, or enclosures of any kind are to be found. In all these different localities this bird is to be met with at most seasons, and in such places it rears its young. If the locality chosen for its nest be a garden, the site selected is usually a hidden corner in an ivy-covered wall or thatch. If it be in the open country, a mossy bank, or a stump covered with evergreen foliage, is preferred, or a crevice in a rock where fern and tangled roots can serve for shelter or concealment.

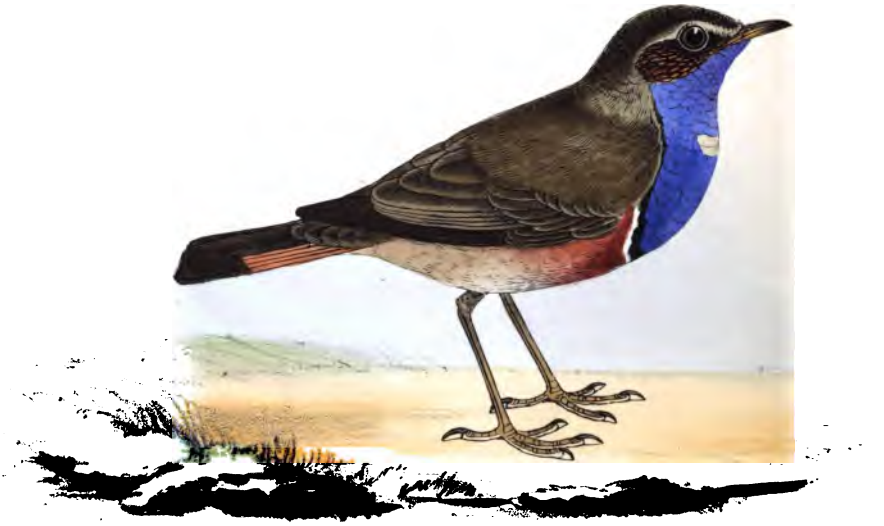
As soon as the young birds can fly they are brought out by the parents to seek for food, and sit upon the lowest branches of a bush, or shrub, while their meal is sought for. Thus in gardens they often fall a prey to the rapacious cat. The young birds, in their nestling plumage, are very little like the parents, except in their actions, which cannot be mistaken. Their upper plumage is dark brown, with the feathers tipped and bordered with pale buff; the breast yellowish-brown, mottled with a darker colour. With the first tinge of red upon his breast the young male begins to sing: we have often seen him in this state, with his whitish throat a little patched with a few red feathers, sit and sing in fitful snatches, as if surprised at his own newly-acquired powers.

The entire length of the Redbreast is six inches. The beak is four lines from the feathers of the forehead to the tip, and eight and a half from the gape. The wing, from the carpus to the tip, is three inches eleven lines. The first quill-feather is about an inch in length, the second two inches, the third, fourth, fifth, and sixth are nearly equal in length, and exceed the second by about four lines. The tail is square, the feathers two and a quarter inches in length, and extending an inch and a quarter beyond the closed wings. The tarsus is one inch in length, the front plate or scale undivided or entire from the ankle to the knee: the tibia measures an inch and a quarter, the thigh bone about an inch, the middle toe and nail, nine lines. The legs and feet are slender, the claws narrow but blunt.

In the adult male the breast is bright rush colour; the same colour extends in a band, from two to three lines in width, across the forehead, surrounds the eyes and extends over part of the coverts of the ears. This rufous mask is entirely encircled by a band of clear smoke-grey, from three to four lines in width, except on the lower part of the body,

where the red of the breast meets the pure white feathers of the belly: the flanks and vent are tinged with olive brown. The upper plumage, including the crown of the head and nape, tippet, back, and coverts of the wings, is olive; the lower part of the back and upper tail-coverts are olive brown; the tail feathers clove brown, tinged with olive brown. The entire wings, with the exception of the lesser coverts already mentioned, are clove brown, the outer webs olive brown. Five of the greater coverts have a dull orange on the tip of the outer web. The under coverts of the wings are tinged with sienna yellow. The base of every feather of the body is dark slate-grey with a white shaft, the colours above enumerated occupying only the tips of the feathers. The eyelids are black; the eyes large, dark, and lustrous.

The egg of the Redbreast is figured 57.



Pl. 58.

INSESSORES.
DENTIROSTRES. *SYLVIADÆ.*

PLATE LVIII.

BLUE-BREASTED WARBLER.

SYLVIA SUECICA.

THIS beautiful warbler is a regular summer visitor on the Continent of Europe, where it is found in some parts in tolerable abundance. It arrives from Africa early in spring, and, spreading over the European continent, penetrates as far as the north of Russia, Finland, Lapland, and Sweden. It is also abundant in Italy, and in the mountainous districts of France. But the western coast of Europe appears less frequented by this species than other parts, since it is not common in the western parts of France, nor in Holland, and it is said not to be met with in Denmark. The fact of this species being more or less scarce upon the western coast of Europe, may account for the extreme rarity of its appearance here, where only two specimens are recorded to have been taken.

Although widely dispersed in Europe, this bird appears to be rather locally disposed. By Bechstein it is spoken of as being seen in great numbers in its spring and autumn passage through Thuringia; but very few remain there to breed; while in other parts of Europe, both north and south of this latitude, they are known to rear their young. According to this naturalist, the migration of the Blue-breasted Warbler is performed in large flights. They pursue their course along

low grounds, frequenting the margins of streams and low damp meadows, and frequently, if a return of cold and snow overtakes them on their passage, they approach dwellings and farmhouses in search of food.

From Greece, Italy, and Spain, these birds are found, in summer, as far as Lapland; but, except during their migratory passage, are nowhere very plentiful, or their habits chiefly confining them to retired and unfrequented places, render them seldom seen. They arrive in Europe towards the end of March, or the beginning of April, the males always preceding the females by about a week, and begin their departure in August, or September, when they are believed to travel chiefly by night, and alone.

The localities most frequented by these Warblers, on their first arrival, are rivulets and swampy pools, marshes interspersed with willow and alder, and other aquatic trees, or abounding in reeds, flags, and rank herbage. In such places they conceal themselves so effectually, that, except by a very attentive observer, acquainted with their habits, they are rarely seen, especially after the leaves are fully come out upon the trees. Occasionally, the male may be observed sitting, for a few minutes at a time, singing among the upper branches of a low tree; but he does not long remain thus exposed, but, quickly descending, seeks again the shelter of the reeds and underwood. It is in situations of this description that the Blue-breasted Warbler passes the early part of the summer, in which also it breeds. Its nest is always built either on, or very near the ground, but, on account of the swampy or marshy nature of the locality usually chosen, it is always difficult to find, and sometimes inaccessible. It is mostly constructed among the remains of decaying herbage, fallen rushes, or tangled roots; sometimes partly concealed in a hole among broken ground. The nest is much like that of the redbreast, composed externally of dead willow leaves

and stalks, green moss, and dry grass or reed tops, lined with horse-hair, or the white down of cotton grass. The eggs are very beautiful, the shell thin and delicate, and of a bluish-green colour, and are nearly round in form, resembling much those of the pied flycatcher; they are five or six in number. The male frequently assists the female in the task of incubation, and never wanders far from the spot, but sometimes, by his presence and his song, betrays the vicinity of the nest. The young birds, before they are able to fly well, flutter along the ground, and at that time much resemble the young of the redbreast. The Blue-breasted Warbler breeds early, the first brood being sometimes on the wing by the end of May.

By Selby, Yarrell, and Temminck, this bird is placed among the Redstarts, but, judging from its form and appearance, it would seem to have more affinity to the redbreast and the nightingale. In its manners, also, it has numerous and striking points of resemblance to these warblers, although in its habits it is rather less sylvan and more aquatic. This species never frequents thick woods, nor is it found among tall trees, except in the immediate neighbourhood of water; it, however, inhabits, according to Temminck, the underwood on the skirts of the forests that abound on the continent where this bird is most plentiful. Its food is chiefly sought on the ground, and consists of terrestrial insects, small aquatic beetles, with their larvæ and chrysalidæ, also the larvæ of gnats, which are sought in mossy swamps.

As autumn approaches, the Blue-breasted Warbler is seen to draw nearer to inhabited and cultivated districts, and to seek, in potatoe, bean, and cabbage fields, the insects that are to be found in great plenty in such localities; but even when brought near, by necessity, to the neighbourhood of man, this species is little seen, owing to its retired and shy habits, but quietly seeks its food, which consists, at that

time, of caterpillars, slugs, worms, &c., under these sheltering plants, and its presence is often not perceived until in the act of flying off.

In its habit, therefore, this species appears much to resemble the redbreast; it is also as solitary in the summer, and as pugnacious, never allowing one of its own species to intrude upon its established haunts. Its flight, also, exactly resembles that of the redbreast, performed near the ground, and consisting of jerks, or springs, caused by the successive expansion and closing of the wings. When on the ground, this species stands very upright, in the manner of the nightingale, displaying its breast; it hops very quickly, then runs a few steps with its wings lowered, and tail erect, and hops again; in running, it moves its legs with a motion so quick that the eye can hardly follow.

The song of this species, although sweet and pleasing, is much inferior to that of the nightingale or redbreast: some of its notes are said, by Bechstein, to resemble those of the wagtails. It is often heard to sing during the night. Its call is *tack-tack, feed-feed!* When caged, it is a lively and sociable bird, and readily attaches itself to man.

In manners, this warbler appears to be very engaging. "Its beauty, sprightliness, and sociability," says Bechstein, "unite in rendering the Blue-breast delightful. Its agreeable song," he also mentions, "sounds like two voices at once; one deep, resembling the gentle humming of a violin string, the other like the soft sound of a flute."

This species is fond of bathing, and, in that exercise, drenches itself completely, like the redbreast; it has been observed never to bathe until the afternoon. It has a peculiarity in roosting that more resembles the habits of the larks than those of the warblers, namely, that it always sleeps upon the ground.

When caged, this bird requires the same food as the

nightingale, and other delicate warblers; also ants' eggs, meal, and earth-worms. Its quarrelsome disposition is shown when caged with another of its own species, in their continual battles, which, if not interrupted, would certainly end in the defeat and death of one of the combatants.

It is probable that this, and many other species of our warblers, in pursuing their vernal and autumnal migrations, follow the course of large rivers, on account of the numberless insects, both aquatic and terrestrial, that are to be found upon their shores, and along the banks of the tributary streams that join their course. Those, especially, that travel early, such as the Blue-breasted Warbler, and the redbreast, must find such a route highly favourable to the satisfying the first demand of nature, that of food. Accordingly, we find Provence, Lorraine, and Alsace, mentioned as visited in great numbers by the Blue-breasted Warbler and the redstart, and other summer birds, in the course of their migratory passage. This tract of country having, through its centre, the Rhone, the Rhine, and the Moselle, and being bounded on the eastern side by the mountains of Switzerland, and on the west by those of Languedoc, Burgundy, and Lorraine, leads from the Mediterranean directly into the heart of Europe, where these birds are seen in greater numbers, especially during their seasons of migration, than in any other part of Europe, and from whence they may speedily attain the northern countries they are known to frequent.

The entire length of the Blue-breasted Warbler is five inches and a half: the beak measures four and a half lines from the forehead to the tip, and seven lines from the tip to the gape. The wing measures nearly three inches from the carpus to the tip; and the tail extends, beyond the closed wings, one inch. The tarsus is an inch in length, and the middle toe seven lines and a half.

The male, in adult plumage, has the whole upper parts,

PLATE LIX.

REDSTART.

PHŒNICURA RUTICILLA. (SWAINS.)

THIS lively and graceful little bird and its congener, usually known by the name of Tithy's Redstart, are the only two of the genus *Phœnicura* known in England. They differ much in manners and habits from the members of the *Sylviadæ* that precede and follow them, principally in the localities chosen in which to rear their young, and in their actions. But in these particulars in which they differ from other birds they strikingly resemble each other.

The species under present consideration arrives in England about the middle of April, rather later than the nightingale. On their first arrival they may be heard singing their brisk and lively song of invitation to their expected mates, but after a few days, or perhaps weeks, thus spent, they apply themselves to the more important duties of the season, namely, the construction of their warm and sheltered nests, and the care of their rising offspring. It can hardly be said that the Redstart confines itself to localities distinguished by any particular feature; they are neither strictly sylvan, like the nightingale, nor aquatic, like the blue-throated warbler, nor altogether delighting in rocks and buildings; but they appear rather like the redbreast, able to accommodate themselves to all these circumstances, and to

Pl. 59.

be in all equally at home. For instance, with regard to the locality chosen for its summer residence, this bird is frequently seen to make choice of a wild and retired situation among over-hanging cliffs, partly covered with vegetation, and interspersed with wood, where it appears so shy, that but a momentary glance is obtained of its form, as it hastily retires from observation. Having observed this, we can hardly believe that it is the same bird that builds under the eaves of inhabited dwellings, and even becomes so familiar as to breed fearlessly in little boxes or jars placed against a cottage wall for that purpose. Their familiarity is not, however, by any means equal to that of the redbreast, as they never enter dwellings like that bird, neither do they trust themselves much nearer to us than the edge of the roof or the top of the wall. But whether the Redstart locates itself in towns or villages, or chooses the greater retirement of woods and forests, it still keeps itself at a similar elevation from the ground, being usually seen upon the higher part of the selected house, or wall, or pollard tree. This bird is not, we believe, found in open, barren country, nor in spots entirely destitute of wood. Among trees, pollards appear to be most attractive to them, especially old pollard willows, as affording, in their decaying cavities, the sort of shelter in which these birds delight; and also because they conceal, in the crevices of their wrinkled bark, innumerable larvæ and insects suitable for food.

The Redstart builds in various localities, but the nest is always more or less concealed and sheltered in all; a hole in an old mossy or ivy covered wall is sometimes chosen, or a cavity in a willow tree: and so necessary does accommodation of this sort appear to the habits of the Redstart, that Selby considers the decrease of this species, in Northumberland, attributable to the substitution of hedges for stone walls, and to the removal of many aged trees, through the greater

attention that has latterly been bestowed on the management of wood. But the chief peculiarity in the breeding arrangement of the Redstarts is in their choosing, very frequently, for the receptacle of their nest the eaves of houses. To such a place they are known to return, year after year, if unmolested. A nest thus situated, is placed beneath the tiles, among the rafters of the roof, to which access is had through a broken tile or orifice, made by that friend to the tile-mender, the strong-billed and mischievous house-sparrow. In a place like this the nest is sometimes placed as far in as the arm can reach, and so devoted is the mother bird to the care of her eggs, or nestlings, or so confident in the security of her position, that she will suffer herself to be touched by the hand before she attempts to fly off, and when flown will not retreat beyond the roof that shelters her treasures. The young birds of this species are almost entirely like the young of the red-breast; but can be distinguished from them when flying from hedge to hedge by the rufous colour upon the tail, which shows plainly when the little wings are spread in flight.

The nest of the Redstart is composed of grass and moss, lined with feathers and hair: the eggs are six or seven in number, of a clear bluish-green, and in form oval.

The song of this bird is sweet, and its organs appear very flexible, as it is said readily, even in a wild state, to imitate the notes of other birds. It sings chiefly morning and evening.

The actions of the Redstart are quick and lively; he usually appears timid, and frightened, and continually shakes his tail.

The food of this species, which consists greatly in the larvæ of insects, is sought for among old trees, walls, and buildings; also in old mossy orchards, etc., etc. Besides insects, and their larvæ, these birds eat elderberries and other

fruits. Bechstein cautions bird-fanciers against giving them earth-worms, as they are hurtful to them when caged; but, according to Sweet, they are fond of common maggots and meal-worms.

This delicate bird penetrates as far towards the north as Siberia, and is found eastward to Japan; in all intermediate countries, we may presume, it is also to be met with in suitable localities, but it is nowhere very numerous or common. It is said to be heard in Germany as early as the end of March, some weeks before the usual period of its arrival here, which agrees with our supposition before mentioned, that the greater part of our migratory warblers, which pass northward in spring from Africa, first penetrate through the valleys of the Rhone and the Rhine to the heart of Europe, and thence disperse in all directions, where the climate, and the necessary supplies of food, invite them. With us this bird is seldom seen before the second or third week in April, and begins its southward passage again in August, or September.

Towards autumn these birds may be seen, accompanied by their young family, but it is the general impression that the young members of this species, and of other small birds, do not migrate with the adult, the parents preceding the young birds by a week or two.

This bird appears more common in the eastern than the western parts of England. In Suffolk, we have observed it to be tolerably common, but it is less so in Surrey and Middlesex, although, in both counties, we have seen it in villages and roadside hedges, and also in a retired and beautiful acclivity, covered with trees, which rises from the banks of the river Mole.

The chief distinguishing characters of the genus *Phœnicura* are: "bill slender, as broad as high at the base; rictus nearly smooth; tarsi moderate; wings rather long, the third and

fourth quills the longest; tail even; the feathers obtuse, and generally rufous." *(Jenyns.)*

The Redstart measures five inches and three quarters in length, and nine and a half in expanse. The beak is four lines and a half from the forehead to the tip; the legs are slender; the tarsus, which measures about an inch, is covered with a single plate, or scale; the toes are armed with very sharp claws.

In the adult male, in spring, the forehead, orbits, ear-coverts, throat, and breast, are fine black, and a small patch of pure white occupies the fore part of the crown of the head. The rest of the head, back, and scapulars are fine blue grey; the wings and wing-coverts are hair brown, with paler margins to the feathers. The two middle feathers of the tail are, in some specimens, brown, in others rufous, tinged with brown along the shaft; the tail-coverts and outer feathers of the tail are rusty red; the breast is bright rust red, lighter towards the belly, which is white; the under wing-coverts are beautiful rust red. The legs are reddish black; the iris brown; the beak black at the tip and yellow at the corners of the gape.

In the adult male in autumn the upper plumage has brownish-grey borders; and the feathers on the under parts, including the throat, breast, and cheeks, are so broadly edged with pale brown fringes that the primitive colours are almost hidden by them.

The female has the entire upper plumage greyish-brown, the under plumage reddish-white; the back and tail as in the male; the chin and throat are white, the breast shaded with brown.

The young birds, before their moult, have the upper plumage olive-brown, clouded with black, and spotted with rust-yellow; the throat yellowish-white, spotted with blackish grey; the tail and wings are darker than in the adult,

and bordered with rusty-brown; the base of the beak is flesh-coloured, and the corners yellow. They may be distinguished from the young of the nightingale by their darker legs.

The egg of this bird is figured 59.

PLATE LX.

TITHY'S REDSTART.

Phœnicura Tithys.

This Redstart is scarcely so widely diffused in Europe as the preceding species, since it does not, except very rarely, extend its western migration so far as our own islands, and its northern boundary is limited to the centre of Sweden, where it is considered an uncommon bird. It inhabits many parts of the middle of Europe, and of Asia. It is a truly Alpine bird, and is, consequently, common in Switzerland, which appears to be a country particularly adapted to its taste. It is found there above the region of vegetation, and bordering on that of eternal snow. It has even been known to remain in Switzerland the whole year in sheltered valleys, if the season has been sufficiently mild for the springs to remain open.

In countries of a less Alpine character, this bird contents itself with dwelling among high rocks and cliffs, blocks of stone or granite. In mountain districts it is very common in towns and villages: it is seldom seen in forests or woods, seldomer in low and marshy countries, except during migration; it is, consequently, rare in Holland.

In towns and villages on the Continent this species is much more common than our Redstart is here; and seeks the most elevated parts of towers, houses, churches, and

Pl. 60.

ruins; whence it continually pours forth its lively song, which, beginning with the dawn, hardly ends with daylight. Its vocal powers are said to be far inferior to those of the common Redstart, both in quality and compass.

This little bird is restless and shy, and although seeking inhabited places, such as cities and towns, appears to do so more on account of the elevated objects such places afford than from any sociability of character, as they never descend from their elevated station, nor appear even in crowded cities to take much notice of, or to be at all molested by, the noise and bustle below.

The spring and summer are passed by them in these lofty abodes; and in such places of concealment and safety as rocks and edifices afford, they bring up their young families. To this mode of nidification the present species of Redstart is even more attached than the former one, and its nest is more commonly deposited among the broken walls of a ruin, about the tower or spire of a church, or beneath the tiles of a house, than in any other situation. In rocky country they are found in fissures and crevices, and in holes of rude walls.

The nest of this species is rather on a large scale, and constructed of dry stalks and grasses, and fibrous roots of plants, closely matted together; the inner lining is hair, or feathers. The eggs, which are pure white, are from five to seven in number, and the young are hatched after thirteen days' incubation. The nestlings are fed with flies, gnats, spiders, and their eggs, chrysalidæ, and the larvæ of such insects as frequent walls and rocks. The song of the male bird is somewhat silenced during the period when the cares of the family engage his attention, although at other times incessant. At this period the parent birds are very restless and clamorous, and frequently repeat their cry of *fid-fid, tack-tack!* These notes are differently pronounced from those of the common

Redstart, although having nearly the same construction. The first brood is hatched the beginning of May, and another frequently succeeds, which flies in June. Like some other species, whose place of incubation is a building or rock, these birds frequently return to the same spot year after year.

In flight these Redstarts are quick and agile, sporting and tumbling over in the air, and rising and falling at pleasure, with great quickness and grace. They are frequently seen gambolling on the roofs of houses, with their young family, but chase away all intruders. In walking, these birds are very erect, and bend their legs but little; they frequently wag their tails, like the common Redstart, and dip, or curtsy, in the manner of the redbreast; especially if an enemy approaches, or they see anything that particularly attracts their attention, when these actions are continually repeated, and accompanied with their cry of alarm.

In autumn these birds frequent gardens, in search of elderberries and insects, which they seek among vegetables, or in fresh-turned ground. The entire length of Tithy's Redstart is six inches and a quarter; the expanse ten and a half; the tail-feathers are two inches and a half, and extend one inch beyond the closed wings. The first quill is very short, the second half an inch shorter than the third, and equal to the seventh: the fourth and fifth are the longest. The beak is thin, and awl-shaped, and compressed towards the tip; five lines in length, two lines broad at the base, and one and a half high; the nostrils are oval, half covered with a membrane, and partly concealed with hairs. The legs are slender, the toes thin, and the claws very sharp. The tarsus measures one inch, the middle toe and claw seven lines and a half.

The adult male, in spring and summer, is of a fine bluish slate colour on the upper parts of the body, including the forehead and crown of the head, the back and scapulars: the lower part of the breast and belly are the same colour. The

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eyes are encircled with black, which also extends over the sides of the face, neck, throat and breast. The wing coverts are dusky black, bordered with ash; the tertials are black, deeply bordered with white on the outer edge: the quill feathers are dusky, as are also the two middle feathers of the tail; the outer feathers of the tail are bright rust colour, slightly bordered towards the tip with brown. The middle of the belly is white, the vent and under tail-coverts pale rust; the beak is black, the corners of the mouth and inside yellow; the iris dark brown. Towards the end of summer the grey edges wear away, and the whole bird appears blacker: it is thus the *Motacilla atrata* of authors. In Italy, and other parts of the south of Europe, they are generally darker than in the north, as warm weather contributes to the wearing away of the edges. After the autumnal moult, the male more resembles the female, as the broad ash-coloured edges nearly conceal the black; the white on the wings, however, remains.

The colour of the female is different; the upper feathering is dull and dirty ash, the under parts brown tinged with rust: the cheeks shaded with brown; the under tail-coverts pale rusty yellow. The larger wing coverts and quill-feathers are edged with brownish grey; the tail paler than in the male; the legs are rather brown than black.

The young, in the nest, are distinguished from those of the preceding species by their darker plumage, being reddish ash on the upper parts, the same on the under parts, but paler; the feathers are slightly spotted with a lighter colour, which gives them a mottled appearance. The male is, in this state, rather darker than the female. The moult takes place in August.

The egg figured 60 is that of this species.

PLATE LXI.

GRASSHOPPER WARBLER.

SALICARIA LOCUSTELLA.

THE small family of aquatic warblers in which the present species is comprised, has only three representatives in our country. These birds, which have been separated by Temminck from the sylvan warblers, under the title of "riverain," and for whom Selby has proposed the generic name of Salicaria, are in form, habits, manners, and song, very dissimilar from those that precede and follow them, and consequently form a distinct and remarkable little group. In their habits they are strictly aquatic: the present species resides chiefly among bogs, marshes, and ponds, while the two that follow are mostly found on the margin of rivers, among reeds and osiers. In their song these birds are far less gifted than most other families of the warblers; and are later in their time of arrival than any other of our British small birds.

The Grasshopper Warbler, rendered partially rare by its local distribution and retired habits, appears not to have been much known to our earlier British writers on ornithology. It is not included, we believe, in the first editions of Bewick; and Montagu speaks of himself as the first author who has noticed its nest. It is said, however, to have been described and known in more remote times, and afterwards to have been disregarded.

Pl. 61.

This species is found in Sweden and Denmark, in the south of Russia and Siberia, in many parts of France and Italy, and also in Germany, Holland, and some parts of Switzerland. It is only to be met with in low, swampy, and wet situations; and, as far as our experience goes, it appears to prefer standing to running water, as it does not, that we are aware of, frequent river-sides, but confines itself entirely to the vicinity of bogs, morasses, and similar situations of a wet and springy nature. We have found it on Ditton Marsh in Surrey, in a boggy enclosure overrun with long, coarse grass; also in the unenclosed part of Claremont, near the black pond, we have heard its cry. On one occasion we sought for it during a considerable time in the vicinity of this spot, which is eminently calculated to suit the peculiar habits of the species. It was on a very hot day, in the middle of summer, that we were walking among the fir-covered hills of this beautiful district, and enjoying the fresh and fragrant perfumes shed by the pine, the larch, and the red fir, that chance led us to the edge of one of the bogs, that are there interspersed among the hills. While considering in what direction we could best cross this morass, for it was of the black and quaking sort, which affords no safe footing even in summer, we suddenly heard the singular note of this little warbler, proceeding, as it appeared, from a small birch tree, so thin in foliage, and so near to us, that its concealment in such a place undetected could be hardly possible. We examined the tree with the utmost minuteness, and were satisfied that the bird did not escape: but could perceive nothing. We next traversed the bog across and across in pursuit of the note, which appeared to come sometimes from one side, and sometimes from the other. We dissected and dispersed tufts of grass, which seemed to conceal the little ventriloquist, but in vain. Still the note rung upon our ears at intervals, sometimes appearing near, and sometimes dis-

tant, and with so short a space of time intervening between its cessation and recommencement that it was not possible for the little singer to have changed its place. We have no doubt, from our knowledge of the habits of the bird, that the seeming change of place was delusive, and that the little creature had remained in the same spot during our whole search. It is, therefore, only by accident that it can be seen, the most patient pursuit being generally fruitless. This species is also known to remain so close in its covert that it is very difficult to start it.

It may be observed, that we frequently describe with minuteness the local features of a spot in which we have found any rare bird, because it may serve as an example of the sort of country in which such birds delight, and in which they are most usually found. These local descriptions of the country, therefore, and the sight or capture of individual specimens, we insert, not for the perusal of persons to whom natural history is an accustomed study, but for the use and encouragement of those who, being unacquainted with the pursuit, desire to know the easiest means of acquiring the power of making their own observations; since ornithology, one of the most interesting of country pursuits, would, we believe, be more extensively studied, we mean in the great book of nature, if the means of pursuing it with success were more generally understood. To this end it is necessary to know in what kind of situations certain birds are to be found, since few, comparatively speaking, are found without being sought for. This knowledge is the more especially necessary in the pursuit of local birds, of which this is one in an eminent degree, because they may be sought for with a probability of success in one limited district, limited by its peculiar natural features, and toiled after in all the surrounding neighbourhood, which may happen to be destitute of those peculiarities, with equal certainty of failure.

When a sight of it can be procured, which is very rarely the case, this little bird may be known by its slender form, and by its long and cuneiform tail. It occasionally may be seen, for a moment, on the lower branches of a tree or shrub in a close thicket, but soon again conceals itself. When on the ground, it runs very fast, and with much grace, in the manner of the meadow pipit; it also climbs up and descends with great agility the reeds and sedges among which it dwells, in the manner of the rest of its tribe.

The note of the Grasshopper Warbler is very remarkable, and exactly resembles the noise made by the mole cricket, or the music of the large green grasshopper. This singular note may be sometimes heard to continue for two or three minutes without cessation, and may be distinguished at a considerable distance. Morning, noon, and night may this sound be heard, at intervals, during the early part of summer, but more especially at night. Later in the season, its song is chiefly confined to the hours of darkness; and this is probably the period when the young nestlings require the attention of the parent, at which time most singing birds are silent.

This little bird has been seen to creep out of its hiding place, in a close and matted thorn, and running to the extremity of a naked branch, deliver its singular song, and then hastily retreat, by the same branch, into its dark recess. The female conceals herself still more assiduously than the male, so that a specimen of that sex can very seldom be obtained.

It is said that the only means of procuring a nest and eggs of this species is to listen to the nocturnal cry of the male during the month of June, as it is at that time most likely to be uttered in the vicinity of the nest. We have never been fortunate enough to obtain one of these rare little specimens, and can, therefore, only speak of and

PLATE LXII.

SEDGE WARBLER.

SALICARIA PHRAGMITIS.

In consequence of its aquatic habits, this bird is of local distribution, and is found only in the neighbourhood of water, where rushes, and osiers, or other water-plants abound. The localities in which we have constantly found it in the greatest abundance, are the small islands that occur in the Thames between the opposite shores of Surrey and Middlesex, and which are, for the most part, appropriated to the cultivation of osiers, on account of their being under water several times in the year. These little islets, as well as various spots upon the banks of the river, are throughout the summer visited in great numbers by these lively little birds, which are continually to be heard in still and warm weather, uttering their peculiar and chattering song. This song, which is the first indication of their arrival, is seldom heard before the last week in April, these birds being, as before-mentioned, late in their spring migration. In May, we have found their nests in great abundance in the osier grounds above-mentioned, in patches of reeds, and among rank herbage in moist and marshy places. They may be discovered with tolerable facility, as little care is taken to conceal them, and the incessant babbling of the parent bird also tends to the discovery of the nest. During its stay in this country,

Pl. 62.

which is from the end of April to September, or October, this noisy little bird may be heard at most hours of the day, and very frequently in the night, if the weather is warm; but even the cheerful voice of this incessant chatterer is silent if the same spot is visited on a cold day, when the wind is blustering. Nevertheless, we doubt whether in more sheltered situations it is so easily silenced.

The Sedge Warbler is by no means shy, but may often be seen flitting among the branches of the willows, osiers, and reeds, it dwells in. It is restless and active, constantly employed in the search for food, which it appears to find among their stems and branches. It is not, like the preceding species, impatient of being observed; on the contrary, we have frequently approached so close to it, when seated upon its eggs, as to touch it before it attempted its escape. When thus forced from its nest, it flies but a few yards, and making a little circuit, instantly returns; and although chased many times from its nest, it perseveringly returns to the spot.

The song of the Sedge Warbler is, in some of its parts, sweet and pleasing, but it is almost constantly intermixed with a rough chattering note that is very unmusical: this constantly repeated note has gained for these little birds the name of chats, by which they are always distinguished by the little cow-herd boys, whose occupation confines them to the extended plains before-mentioned, that border the Thames along some part of its course.

We have invariably found the nest of this species suspended; and usually from six inches to a foot from the ground. The plants among which we have most frequently taken it have been either reeds or nettles, to whose upright stems the nest is attached by means of the grasses, of which it is chiefly composed, being carried round their stalks. Three, four, or more reeds are in this manner made to serve

as upright supporters; and when cut down, the reeds may be easily slipped out of the sides of the nest, without in the least injuring the structure. We have also found these nests in white-thorn bushes, and in the black-thorn, or sloe, which grows in abundance on some of the open plains in this district, always about the same elevation from the ground. The materials of which they are composed are various. One of our specimens is chiefly constructed of bents, rye grass, and green moss on the outside; and internally of roots, and the down of the willow, or the willow herb, with swans'-down, and one or two feathers; lined with long horse-hairs. Another specimen is composed, on the outside, of tufts of dead grass, with the root attached; the inside is formed of roots and the flowering tops of reeds; with the down of the hare or rabbit, and abundance of horse-hairs.

The nests of this bird are well built and compact, and generally have a good deal of warm lining interwoven in their substance; the sides of the nest are often an inch and a half in thickness, and the cup measures two inches across the top, and rather more in depth. The depth and substantial thickness are highly necessary for the security of the little brood, as the slight supporters of the nest often yield to the force of the wind. In this small space of two inches in diameter, are reared six, and sometimes seven, nestlings. When the young birds leave the nest, they flutter about among their native reeds, and receive from the parent birds their minute insect food. Whether the nest is placed among reeds or in a low bush, it is always suspended; that is, the bottom of the nest never rests upon the branches beneath. We cannot agree with those authors who assert that this species chooses, in preference, for its nesting place spots inaccessible through the muddy nature of the soil; since we have found their nests, without number, on the

osier islands before mentioned, and on the flat, extended grass plains beside the Thames, the range at Shepperton in particular, which places are dry and firm, and never flooded during the summer half of the year.

The eggs of the Sedge Warbler are pale stone-colour, freckled over minutely with spots of a rather darker shade; sometimes we have found them nearly plain stone-colour, at other times marbled with pale ash-green, approaching in appearance to those of the reed warbler. We have more than once found as many as seven eggs in the nest of this species. In some nests the eggs are rather long, as figured in the plate; in others nearly round, and these are usually the plainest in colour. In all specimens dark hair-like streaks may be observed towards the larger end.

The Sedge Warbler is found on the reedy banks of rivers and lakes in most parts of England and Scotland, Wales, and Ireland. On the continent of Europe it is also of very wide distribution, occurring, in similar situations, from the most southern parts, as far north as the arctic circle.

The Sedge Warbler measures less than five inches in entire length. The wing, from the carpus to the tip, is two inches and a half; the tail extends three quarters of an inch beyond the closed wings, and the outer tail-feathers are three and a half lines shorter than the middle ones. The beak measures five lines in length.

The male and female are so much alike in appearance that one description will suffice for both. From the base of the upper mandible a pale yellow streak passes over the eye, beneath which is a dark line, passing through the eye to the ear; the cheeks are brown, intermixed with yellowish white. The throat is white, tinged with rufous yellow on the sides; the breast and belly are dirty white; the upper part of the breast and flanks tinged with rufous yellow: the rest of the under parts pale brownish yellow. The feathers

on the forehead and crown are dusky, and form a sort of cap; the nape is olive; the tippet the same colour, but the centres of the feathers are darker, forming spots. The lower part of the back is rufous; the upper coverts of the tail rufous-brown; the quills and tail-feathers clove-brown, edged with olive.

The egg No. 62 belongs to the Sedge Warbler.

Pl. 63

INSESSORES.
DENTIROSTRES. *SYLVIADÆ.*

PLATE LXIII.

REED WARBLER.

SALICARIA ARUNDINACEA.

THIS beautiful little bird, which is considered much more rare and local than the sedge warbler, occurs in tolerable abundance on the Middlesex and Surrey borders of the Thames, and the intervening islets. It is easily distinguished from the preceding species by its upper plumage, which is of a plain brown, unvaried by spots: it is also rather larger in size, besides having many other less apparent distinctions.

Of all our summer birds, the Reed Warbler is the latest in its arrival, seldom appearing before the second week in May. It frequents spots similar to those inhabited by the sedge-bird, namely, the borders of rivers and ponds. On the Thames we have very frequently seen it and heard its song, and also taken its nests in various places. The song of this bird is far superior to that of the sedge warbler; it is often heard in the day, but more frequently at night, at which time we have often listened to it for a few minutes under the impression that we heard a nightingale of inferior quality. This deception, however, does not last long, for although the bird commences his song with many of the stanzas of the nightingale, he presently relapses into variations of his own, of the same character as the chattering notes of his congener the sedge

warbler. Neither is his voice in its better portions so clear and flute-like as the nightingale's.

The nests of the Reed Warbler have frequently come under our observation, and we have taken many of them. These we have always found in low willows or osiers growing in the water, sometimes in the bed of the river, sometimes near the shore, but always so surrounded by water as to be rarely reached by the hand without the assistance of a boat. The nests we have taken have all been suspended among the forked branches of the shrub, not resting upon the junction of the shoots, like the nests of most other birds, but elevated above the part from which the upright supporters spring. The nest has a singular appearance, being generally composed of very thin thread-like materials; and when the branch has been some time cut down, and the leaves have fallen off, the whole, to use a very homely comparison, has the appearance of a stocking in the process of knitting, hanging among its many pins. We have never found specimens of the nest of this bird suspended among reeds, but cannot deny that such situations are sometimes chosen. The eggs of this bird, represented in our plate (fig. 63) are roundish in form, and usually of the colour there indicated; but are sometimes to be found paler and of smaller size: we have never found more than three or four in a nest.

The materials composing the nest are long, fine grasses, delicate fibrous roots, the flowering tops of reeds, and the long, red, clinging stalks that we believe to be the remains of green moss. The outer portion of the nest is triangular or quadrangular, according to the number of stems upon which it hangs; but the inside is finished in a round form, and neatly lined with fine grass. Spider-webs and swan's-down are often intermixed. The nest, when complete, is nearly three inches deep within, and five or six without.

The young birds of this species are hatched in July; on

the 24th of which month we have in our note-book the following memorandum: among the pollard willows beside the Abbey river we heard some birds making a croaking noise, which sounded much like the alarm-note of the nightingale: after watching a little while, we observed several small birds flitting about, and found them to be young Reed-warblers that could just fly, and were receiving food from their parents. Their note resembled, *ikurrrrrr! ikurrrrrr!* uttered croakingly. The young birds, which we could distinguish by their shorter tails, looked the yellowest; the old birds were nearly white beneath, and had a bluish cast upon the chin and throat.

The abbey river above mentioned is a small stream that runs through Chertsey in Surrey, and joins the Thames near the spot where the ancient abbey of that name stood. We mention the spot as being a singular locality for a bird usually considered shy; the place where the young birds were seen, and where doubtless they had been hatched, was not a stone's throw from the main street of the town, with which the little river runs parallel at that part.

The Reed Warbler is not uncommon in this country in the eastern and southern counties, but is rarely found in the midland, and has not been met with further north than Derbyshire. It is also very local even in these parts.

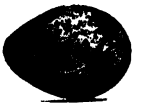
According to Temminck, this species is very abundant in reedy spots in Holland, France, and Germany, but rare in more eastern countries. It retires early from Europe.

The entire length of this bird is five inches and a half. The wing, from the carpus to the tip, is two inches and a half; and the tail extends nearly an inch and a half beyond the wings when closed; the two middle feathers of the tail are the longest, and are rather pointed. The beak is slender and long, measuring five lines from the forehead, and nine lines from the gape, to the tip; it is brown on the upper

mandible, and yellowish flesh-colour on the lower; the gape is furnished with fine bristles. The eye is small, but brilliant, and of a pale orange colour. The legs and feet are silvery-grey, the soles yellowish.

The whole upper plumage of the Reed Warbler is greyish-olive, without any darker spots: the quill and tail-feathers are dusky, bordered with olive-brown. A slightly defined dusky line extends before and behind the eye, and a pale yellowish-brown streak passes above it. The under parts of the plumage are, in old birds, silvery-white upon the chin and belly, and yellowish-rufous upon the chest, flanks, and sides of the neck. The feathers above the knee are rufous.

The egg of the Reed Warbler is figured 63.



61.

62.

63.

Pl 64.

INSESSORES.
DENTIROSTRES. *SYLVIADÆ.*

PLATE LXIV.

NIGHTINGALE.

SYLVIA LUSCINIA.

It is well known that, in some parts of England, Nightingales are very abundant, while in others, apparently offering the same natural advantages, they are never found. They are most numerous on the eastern coast, and extend as far as the southern border of Durham, which appears to be their boundary in that direction. They are found in some of the midland and southern counties of England, as far west as the third degree of longitude, as observed by Mr. Blyth; but in the western half of the kingdom, including the greater part of Devonshire, Cornwall, Wales, and Lancashire, they are never met with; neither have they been ever found in Scotland or Ireland.

Respecting the partial distribution of these delightful singers, many conjectures have been hazarded, but none either very conclusive or satisfactory. "Nightingales," observes Gilbert White, "not only never reach Northumberland and Scotland, but also, as I have been always told, Devonshire and Cornwall. In these last two counties, we cannot attribute the failure of them to the want of warmth; the defect in the west is rather a presumptive argument that these birds come over to us from the continent at the narrowest passage, and do not stroll so far westward." How is it, then, we

would ask, that the blackcap and other warblers, possessing probably not greater powers of flight, should extend over many parts of the sister kingdoms in which the Nightingale is unknown?

Neither is it reasonable to suppose that Wales, Ireland, and the few excluded counties of England, are altogether destitute of a particular insect food necessary to their subsistence, unless we take into consideration the nature of the soil, which operates unquestionably upon the distribution of the insect race, through the medium of those vegetable productions upon which the larvæ of many of that race are supported. That the soil of Wales and of Cornwall differs very essentially from that of other parts of the island, is apparent to the most casual observer, in its stoney and rocky surface, no less than in its internal treasures of metals and ores.

Montagu, who had in captivity a little brood of this species, observed that the parent Nightingales fed them chiefly with green caterpillars, but does not mention of what description these were supposed to be. This is to be regretted, as it might have afforded a clue to this curious investigation, since we know that many insects, in the caterpillar state, confine themselves entirely to one or two species of plant for food, and reject all others.

The conjecture mentioned by the same naturalist, that Nightingales may possibly not be found except where cowslips grow, agrees with the theory here hazarded, that the soil may have great influence on the partial distribution of birds. With regard to cowslips, which indicate a particular soil, moist and loamy, we can add our own testimony in corroboration of this opinion, that the places which we have constantly known to be most frequented by Nightingales *are* well supplied with this fragrant plant.

But, if the excluded parts of the kingdom are not supplied with the food proper for this species, it may be asked, upon

what, then, did the redbreasts feed their foster nestlings, in an experiment made by Sir John Sinclair to introduce Nightingales into Scotland? These Nightingales, we are told, were safely reared, flew, and remained in the same vicinity until the usual period of their migration; but the following season none returned.

The line of demarcation being so strongly drawn that limits the western range of this species, and which, apparently, they never pass over, we are induced to hazard another supposition on the subject, which we leave to future observation to confirm or confute. As these warblers are invariably found in low, sheltered, and wooded localities, it is possible that their nature does not incline them to pass over hilly and mountainous boundaries, such as they must surmount in attempting to reach Scotland, or the excluded parts of England and Wales; and, consequently, that their dispersion over the eastern half of England only, may rather be due to its generally level character, than to any of the supposed causes before mentioned.

In support of this conjecture we may observe, that the countries on the Continent which are most frequented by the Nightingale, are also, in their general aspect, level. These are, Holland, Denmark, Sweden, Russia, and Siberia, northward; and, to the south, France, parts of Italy and Spain, of Germany and Austria. We have frequently remarked that Nightingales avoid isolated hills, even of small elevation, though covered by wood and pasture, orchards and gardens, such as might tempt the sojourn of any sylvan warbler; at the same time that, in the low surrounding country, they have been plentiful.

The style of country most resorted to by this species, according to our observation, consists of cultivated plains, interspersed with hedgerows and plantations, and hills of gentle ascent and very moderate elevation. The presence of rivers

or running streams does not appear necessary to them, as we know them to subsist in great numbers in situations at some distance from running water; therefore, their seeming partiality for river-side localities may be in consequence of their usually low and sheltered position.

The continent of Europe possesses another and larger species of Nightingale, the *Sylvia philomela* of Bechstein, which, from its habit of residing in hilly as well as in level countries, might be more worthy the attention of experimentalists who wish to establish these delightful warblers beyond the limits of our native Nightingale; but, as the position of this species is still further removed towards the east, being an inhabitant of Austria, Germany, and Poland, it is doubtful whether individuals reared in this country would return.

The arrival of this species in England takes place usually in the middle of April; and sometimes, on the coast of Suffolk, as early as the 7th of that month. The presence of the males, whose arrival precedes that of the females by some days, is immediately announced by their incomparable song, which, when first heard in the still moist evenings of this hopeful season, adds another charm to the opening promises of spring. The song of this delightful warbler has been allowed, in all ages, and we believe in all countries where it is known, to be unrivaled. Buffon, after enumerating many of the finest singing birds of Europe, including the blackcap, the lark, the canary, and the blackbird, affirms that the song of each of these, when taken in its whole extent, is only one couplet of that of the Nightingale.

The power of the song of this species is no less surprising than its elegance and variety; it has been ascertained that its voice may be heard, when the air is calm, to fill a space of a mile in diameter. It has been also noticed by Mr. Hunter, that the muscles of the larynx are, in this species, stronger than in any other of its size.

The Nightingale, in its natural state, is by no means a shy bird; it may be frequently noticed by day by those who are acquainted with its plain brown plumage; and in the silence of night, when its presence is more easily detected by its song, it is found in many sylvan localities to be an inhabitant of our gardens, wherever tall trees invite its residence. When caged, the Nightingale is capable of strong attachment towards those who feed and attend upon it, and may be kept for a considerable time. Bechstein mentions one that lived in confinement twenty-five years. Individuals caught soon after their arrival in this country may frequently be preserved without difficulty, but when taken later in the season, after the females have appeared, they pine and die. Young birds may be brought up from the nest with a reasonable degree of care, and these, having never known the charms of liberty, are not conscious of its loss. The young nestlings very early begin to sing; we were lately assured by a person who is fond of ornithology, and who has, with much success, frequently brought up nestlings of this species, that a young Nightingale, taken by him from the nest, began to sing on the seventh day from its capture. It was, he conjectured from the forwardness of its nestling plumage, about nine days old when taken, so that on the sixteenth day of its existence this little warbler, taught by native instinct, commenced its musical career. We cannot but consider this as an instance of precocious talent, since few birds begin to sing while in their nestling feathers.

Gilbert White's opinion, that Nightingales enter England at the narrowest passage, namely, at the straits of Dover, appears very probable, as they are heard much earlier on the continent of Europe than they are here. In Holland, they arrive sometimes as early as the middle of March, at which time we have frequently heard them, in plantations on the borders of the Amstel, in the immediate vicinity of Amster-

dam. These plantations are situated in a warm and sheltered spot, being on low lands that have been recovered from the sea.

In captivity, the Nightingale sings in the day as well as in the night, in winter and in summer, except during the period of moulting. We have observed that birds, even in the house, are always silent and subdued during a thunderstorm. A Nightingale that we had in Holland, where severe thunderstorms are very prevalent in hot weather, always forewarned us of the moment when the severity of the storm was beginning to give way, by breaking forth into his sweet song before any other sign of its abatement was apparent to us.

The Nightingale is of a solitary disposition as far as regards his own species, and very tenacious of the undisturbed possession of his own domain; which may indeed be considered his by former tenure or hereditary right, as this species is believed invariably to return, year after year, to pass the summer in the place of its birth. When re-established in their summer haunt, these birds wander but little, but may be heard nightly to pour forth, each from his respective tree, their plaintive melody. This fact may be observed by any one at all conversant with these birds, as there exists great variation in the qualities of their song, some being much finer singers than others.

The Nightingale constructs its nest either upon the ground or against a stem at the elevation of two or three feet above it; the locality chosen is usually a plantation, grove, or thick overhanging hedge in a sheltered spot, where the air is fresh and cool and the ground moist. The nest is generally composed chiefly of fallen leaves. A specimen in our possession is formed of dead leaves of the oak, which are curiously and beautifully arranged. Each leaf is placed nearly upright, with its stalk towards the base of the nest, and a number of leaves being employed, and placed with

great regularity, the whole has much the form and size of a half expanded water-lily. The oak leaves thus curiously arranged are interwoven with strips of bark, and portions of dry rushes, so as to form a very solid and thick nest; and the inside is lined with long fibres of bark, roots, and a few hairs. Such a structure, although in strict harmony with the habits of the Nightingale, must, we think, have more of poetry than comfort in it, as not a single substance of warmth or softness enters into its composition. This nest contained four eggs when taken, but five are frequently found; they are in colour oil-green, as represented in the plate, and roundish in form. Some vary from this description, and are much longer in form, paler in the ground-colour, and mottled with olive-brown. The young birds soon leave the nest, and flutter among the underwood and hedge-rows. If their place of concealment is at this period discovered, the old birds are most clamorous in their expressions of anxiety, and frequently repeat sharply the word *tack!*

The attachment of this species to its young, and its grief at their loss, have been noticed by many writers, ancient and modern. Our friend, the Rev. E. J. Moor, sends us, on this subject, a memorandum from his journal: "One evening, while I was at college," he says, "happening to drink tea with the late Rev. J. Lambert, Fellow of Trinity, he told me the following fact illustrative of Virgil's extreme accuracy in describing natural objects. We had been speaking of those well-known lovely lines in the fourth Georgic on the Nightingale's lamentation for the loss of her young, when Mr. Lambert told me that riding once through one of the toll-gates near Cambridge, he observed the keeper of the gate and his wife (who were aged persons) apparently much dejected. Upon inquiring into the cause of their uneasiness, the man assured Mr. Lambert that he and his wife had both

been made very unhappy by a Nightingale which had built in their garden, and had the day before been robbed of its young. This loss she had been deploring in such a melancholy strain all the night, as not only to deprive him and his wife of sleep, but also to leave them in the morning full of sorrow; from which they had evidently not recovered when Mr. Lambert saw them."

The food of this species consists of insects of different kinds, chiefly terrestrial. On this account it is often seen upon the ground, although its habits are decidedly arboreal, as it mostly resides and sings among lofty trees. When upon the ground, this bird stands very erect, as if conscious of the high rank he holds among his fellows. His flight from bush to bush is very light, on account of the breadth of his wings and tail. The Nightingale retires from this country in August or September, and leaves the most southern parts of Europe in October, to winter, as it is believed, in Africa and Syria.

The entire length of this species is six inches and a quarter. The beak measures five and a half lines from the tip to the forehead, and nine lines to the gape. The wing is three inches and a quarter long, and the tail extends an inch and a quarter beyond it when closed: the third quill-feather is the longest. The tarsi measure an inch in length, and are undivided in the shaft; they are brownish flesh-colour. The beak is, at the base of the under mandible, flesh-colour, the rest brown; the corners of the mouth are yellow. The upper plumage, including the head, back, and wings, is cinnamon-brown; the tail and upper coverts rust-coloured; the under parts are greyish-white, the sides of the breast and flanks tinged with reddish-brown; the iris is greyish-brown. There is little perceptible difference in plumage between the sexes, except that the throat of the male is whiter than that of the female.

In our plate the egg of the Nightingale is figured 64.

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Pl 65

PLATE LXV.

BLACKCAP.

CURRUCA ATRICAPILLA.

THE Blackcap, the next in rank, as a singing-bird, after the nightingale, is occasionally seen on the eastern coast of England as early as the 28th of March; but in late seasons its arrival is sometimes not noticed before the middle of April. This species is more widely diffused throughout these kingdoms than the nightingale, being found in Scotland, Wales, and Ireland. It is also extensively spread over the continents of Europe, Asia, and Africa, occurring in many distant parts, as we are informed by various observers. Japan, Java, the Cape of Good Hope, Norway, Lapland, and Sweden, and many intermediate parts, have furnished specimens of this species, in no way differing from our own.

The Blackcap is more hardy than many of our summer visitors. Instances have been recorded of its being shot in this country in winter; which must, however, be considered as of rare occurrence: but it does not, like our most tender migratory birds, entirely leave Europe in the autumn, since Temminck observes that some of this species pass the winter in the vicinity of Messina.

This warbler inhabits hilly as well as level country, and is even found in Switzerland. It frequents woods, planta-

tions, and thickets, especially where the ground is well covered with brushwood and tangled herbage. Many of them also inhabit gardens and orchards, where, in the spring, they are eminently serviceable in destroying innumerable insects, such as small caterpillars, which they pick from among the buds, blossoms, and leaves of fruit trees; also the chrysalides of various insects which are secreted about their rugged bark. These services are apt to be forgotten when, as the summer fruits ripen, the Blackcap is found among the foremost in partaking of them, and that not sparingly. Its partiality is particularly evinced for cherries, especially the most juicy sorts, of which it is so fond that it can hardly be driven from them, but returns again and again to a favourite tree. This species feeds also upon the berries of the ivy and the elder, upon blackberries, dewberries, etc. It seldom takes insects upon the wing, but occasionally descends to the ground in search of worms and crawling things.

We have occasionally seen, in gardens and hedgerows, the young nestlings beginning to fly, and attended assiduously by the parents. When they find themselves followed or observed, the old birds utter sharply, like the nightingale, the warning note, *tack!* The young birds, in their nestling plumage, resemble the female, but when the autumnal moult commences, the beautiful black cap of the male begins to be assumed. This makes its appearance first about the base of the beak, which part becomes interspersed with minute black feathers, extending gradually over the whole head: and we have observed, in specimens which we have brought up from the nest, that the song of the male commences simultaneously with the first appearance of the black hood. The beak and legs of this species are, in young specimens, of a beautiful clear grey colour, and of most delicate texture, resembling the finest kid leather:

in adult birds the beak is tinged and tipped with dusky-horn.

The Blackcap is described by Gilbert White as "a delicate songster." "Its note," he says, "possesses a wild sweetness, and when this bird sits calmly and engages in song in earnest, he pours forth very sweet but inward melody, and expresses great variety of soft and gentle modulations, superior, perhaps, to those of any of our warblers, the nightingale excepted." Its wild warbling song bears, in some of its upper notes, a resemblance to that of the redbreast, for which it is often no doubt mistaken; but it has less of shrillness and more of melodious depth and fulness. It far surpasses that bird in its lower tones, which are as round and full as the finest notes of the song thrush, and of surprising power when the small size of the delicate creature is considered. This bird is by no means shy in its habits, nor does it seem solicitous to conceal itself when singing, but openly sits on the branch of a fruit-tree in an orchard or cottage garden, and appears not at all disturbed by persons passing, but calmly looks around, pouring forth from time to time its melodious song.

The nest of the Blackcap is usually placed among brambles, nettles, or low underwood: it is a thin structure, composed of dry grass and stalks, and lined with a few hairs. Towards the end of April eggs of this species may be found; they vary in number from four to six, and although the colour and other particulars differ much in different specimens, they usually present a marked character by which they may be readily distinguished from all but the eggs of the garden warbler, to which they often bear a great resemblance. The ground colour is usually reddish-white, marbled with olive-brown and ash-grey, over which are strewed a few round dusky spots, each surrounded by

a reddish-brown border, resembling the mark of a burn, which character is seldom wanting.

The manners of this species are light and lively, and when singing it swells its throat and elevates its crest. Its feet and legs are small and short, and well adapted for perching.

The male bird of this species is distinguished by its black hood, or cap, which, commencing near the base of the bill, covers the crown of the head. The nape and sides of the neck are fine bluish-grey; the throat and under parts are silvery or greyish-white; the breast and flanks are tinged with peach blossom. The back and lesser coverts of the wings are grey, tinged with green, the rest of the wings and tail dusky brown. All the colours of the plumage are beautifully softened one into the other, and the tail appears slightly forked when closed. The female is readily known from the adult male by her hood, which is of a reddish-brown colour; the rest of her plumage much resembles that of the male, but the feathers of the under parts are tinged with rufous-yellow. The beak is rather short, the nostrils are naked, and of a long oval form. The iris is reddish-brown.

The entire length of the Blackcap is nearly five inches and three quarters: the wing measures two inches and three quarters, and the tail extends an inch and a half beyond it when closed. The beak is five lines from the tip to the forehead, and the tarsi measure nine lines. The first quill-feather is short, the third the longest in the wing.

The egg of the Blackcap is figured 65.

Pl. 66.

INSESSORES.
DENTIROSTRES. *SYLVIADÆ.*

PLATE LXVI.

GARDEN WARBLER.

CURRUCA HORTENSIS. (*Bechstein.*)

THE Garden Warbler is another of that interesting class of small birds that visit our island in summer, and delight us with their rich, melodious, and varied songs. This species, as its name implies, is one that frequents the neighbourhood of man, and adds its sweet note to the summer music of our gardens. It is not so commonly known as many of our migratory birds, as it is shy and retired in its habits, and being very plain in its plumage, is not readily distinguished when on the wing from other warblers of its size.

The song of the Garden Warbler is considered to be very little inferior to that of the nightingale; it possesses sweetness, variety, and depth of tone; and many of its flute-like notes resemble those of the blackbird. Its song is well sustained, and frequently continued during the greater part of the day.

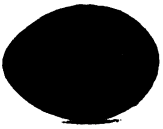
As a species, the Garden Warbler is tolerably well diffused, being found in most parts of England, and, according to Selby, occurring throughout the greater part of Scotland, in wooded districts on the margin of rivers and lakes. It is not, however, numerous, or its habits keep it much concealed. As this bird is rather late in its arrival, which varies from the middle of April to the middle of May, it probably produces but one brood in the season. It builds

usually in low bushes or underwood, and forms a slight nest loosely constructed, and composed of dry grass stalks, strips of the fibrous stems of hemlock or nettles, and rarely a little green moss. Very little care is taken to conceal the nest. The eggs, usually five in number, are mottled with ash-grey and brown upon a reddish-white ground. Some differ from this description, and resemble very nearly those of the blackcap.

The food of this species is the same as that of the preceding, to which may be added the caterpillars of the cabbage butterfly, which, although rejected by most other birds, are by these eagerly devoured.

The Garden Warbler is, according to Temminck, abundant in Holland, and common in all the southern and temperate countries of Europe. It commences its migration southward as early as August. This bird is the Fauvette of Montagu, and the Greater Pettichaps of Selby.

The egg of this species is figured 66 in the plate.



64.

65.

66.

Pl. 67.

PLATE LXVII.

WHITETHROAT.

SYLVIA CINEREA.

THE WHITETHROAT is not among the earliest of our spring migrants, appearing seldom before the middle or end of April. It is considered one of the most common, and most generally diffused of summer birds, an opinion we are not disposed to contradict, as we have usually met with the nests of this species more frequently than those of any other summer bird. There is scarcely a green lane in the country, or thick hedge, or patch of furze, where these birds may not be found, and detected by their lively song. From such a spot they may be often seen to rise singing, and performing some curious evolution at the same time, as if to express their enjoyment of existence: they also sing while on the wing from bush to bush.

The song of the Whitethroat has been much maligned, and said to be so interspersed with harsh notes as to be beneath attention; nevertheless, this species has made some friends among those whose opportunities of observation were the greatest. Sweet says of its song that, in his opinion, "it cannot be surpassed, as it is both lively, sweet, and loud, and consists of a great variety of notes." White, on the other hand, says, "The note of the Whitethroat, which is continually repeated, and often attended with odd gesticulations

on the wing, is harsh and displeasing." "These birds," he continues, "seem of a pugnacious disposition; for they sing with an erected crest, and attitudes of rivalry and defiance; are shy, and wild in breeding time, avoiding neighbourhoods, and haunting lonely lanes and commons."

These various opinions, however, with regard to the singing powers of this species may be easily reconciled. The louder notes are sometimes harsh, and as these only are occasionally heard, they have procured for this little warbler a character which it does not, on nearer acquaintance, deserve.

We are among the admirers of these lively birds, having frequently heard them sing most agreeably while sporting up and down above the tops of the trees, rising and falling with a peculiar action of the wings and body; then starting off to another tree, and presently returning, again and again, singing all the while their loud and clear song. The song is different from that of most other birds, and in our opinion forms a most pleasing variety; it is delivered in sounds clear and distinct, and set in rather a low key.

The Whitethroat, although shy in its personal habits, is the least careful of all small birds in concealing its nest, which it often places in situations so exposed to observation, as to excite wonder at its apparent want of precautionary instinct. The situations chosen are various: the elevation usually about two feet from the ground. We have sometimes found the nest in a close furze bush; but more frequently among brambles or nettles beside a ditch or bank.

We have noticed a singular feat, acted by this little bird, which was probably intended to draw our attention from its nest. Passing a high bank in a lane, we observed a Whitethroat rolling down its sandy side, and throwing itself into strange positions, as if wounded; it struggled and shuffled along, keeping itself just beyond our reach, and finally flew away. Suspecting the design of this manœuvre, we sought

about the bushes that grew beside the bank, and presently, at the distance of a few yards, found the nest. Does this action, practised by many birds besides the Whitethroat, proceed from the agony of its alarm, or is it an affectionate device, practised to draw off the attention of the intruder from its ill-concealed treasure?

During the spring, the Whitethroat is found generally dispersed throughout the country: we have found them in low and flat localities, and also on the tops of hills of two or three hundred feet in elevation. According to Gilbert White, they are found on the very tops of the Sussex downs; where there are bushes and covert. In summer, as soon as the young can fly, a change of residence takes place, and the nestlings are conducted by their parents to orchards and gardens, where, the fruit being then ripening, they commit much mischief, and are generally held, among gardeners, in great disrepute.

This bird is found throughout Europe, the most northern parts excepted: it penetrates as far as Sweden and Russia, beyond the range of any other of the warblers except the blackcap. In the middle, and southern parts of Europe, it is the most common of all the Sylvias. It is plentiful in Holland.

The note of this species, when alarmed, is *shurr;* and the call of the male in spring is *hwed! hwed!*

The food of the Whitethroat consists of winged insects, and small beetles with their larvæ, and caterpillars; also many kinds of fruit.

The nest of the Whitethroat, although usually denominated a slight structure, is one of remarkable interest and beauty, and presents to the observing naturalist matter for much admiration. It is indeed in appearance a slight structure, but its component parts are so skilfully and beautifully interwoven, that we know not any nest more strong, firm,

and elastic. The last named quality, elasticity, is due to the horse-hairs with which it is usually very thickly lined, so as, in some specimens, nearly to conceal the stalks or grasses of the outer work; while in others very few hairs are perceptible. We must conclude that in the nests of this species, as well as others, many varieties of construction occur, since we can neither find that specimens in our possession are bound together outside with spider webs to keep them together, nor the horse hair glued with saliva, as some credible authors have affirmed. All the specimens we have seen are formed exteriorly of the dry, rough stalks of a species of galium, sufficiently clinging in its own nature to answer the purpose required; and we think no necromancy is necessary, beyond the instinctive skill of the little architect, to keep the long hairs in their places. Let us not, however, be understood to disparage the qualities of spider cots as a building material of the most efficient kind; since some nests, such as those wonderful structures of the long-tailed titmouse, appear to owe a great deal of their consistency to this production. We have noticed, in all the nests of this species that have come under our observation, that the hairs used for lining have been of a dark colour, mostly black; but we do not know whether this is a constant character.

The eggs of the Whitethroat vary greatly in size and colour; but in the character of their markings they are tolerably constant. The dimensions vary from nine and a half lines, the size represented in the plate, to eight lines. The most usual colour of the ground is pale green, mottled with greenish brown, and freckled over the larger end with dull ash-coloured spots. In some nests of this species very different eggs are found: we have some specimens nearly grass green, freckled with large dark-green spots; others in which the ground colour is olive brown, freckled in a similar

manner with dark brown and black; other specimens are nearly as pale as the egg of the Dartford warbler, figured below. In our plate we have represented one of the most usual appearance.

The entire length of this species is five inches nine lines. The wing measures two inches eight lines from the carpus to the tip; its first quill-feather is remarkably short, not exceeding four lines in length, the second is only half a line shorter than the third and fourth, which are equal, and the longest in the wing. The tail extends beyond the tips of the closed wings one inch and a half; its feathers are graduated, and slightly decreasing in length from the middle towards the sides, the outermost being four lines shorter than the central ones. The beak measures four lines from the forehead to the tip, and the gape is very slightly fringed with hairs. The tarsi measure eleven lines.

The plumage of this beautiful little bird, although not remarkable for the brilliancy of its colours, presents an elegant assemblage of tints the most delicate and soft, shading into one another like the tints upon mother-of-pearl. The silvery white of the throat loses itself in the lovely peach-blossom of the breast, which again gives place to white upon the belly; the flanks and under coverts of the tail are white, tinged with pale orange-brown. The upper plumage is, upon the head, nape, and ear-coverts slate colour, tinged with brown; the back is olivaceous brown; the upper coverts of the tail inclining more to olive. The quill-feathers of the wings are brown, with lighter edges; the tail the same, except the outer feather, which is of a dull white; the coverts of the wings and tertials are brown, deeply bordered with rust. The beak is dark bluish horn; the base of the under mandible yellow, the corners of the gape yellowish-green. The iris is olive-yellow, lightest against the pupil; the eye-

lids are naked, and olive-brown in colour. The legs are pale rust-colour in the tarsus, the feet are olive-brown.

The female very nearly resembles the male, but her colours are more obscured by brown, and the rose-colour upon the breast is less apparent. It must be observed that this colour fades very soon after death, so that in preserved specimens nothing of it is to be seen.

Figure 67 in the egg-plate is that of the Whitethroat.

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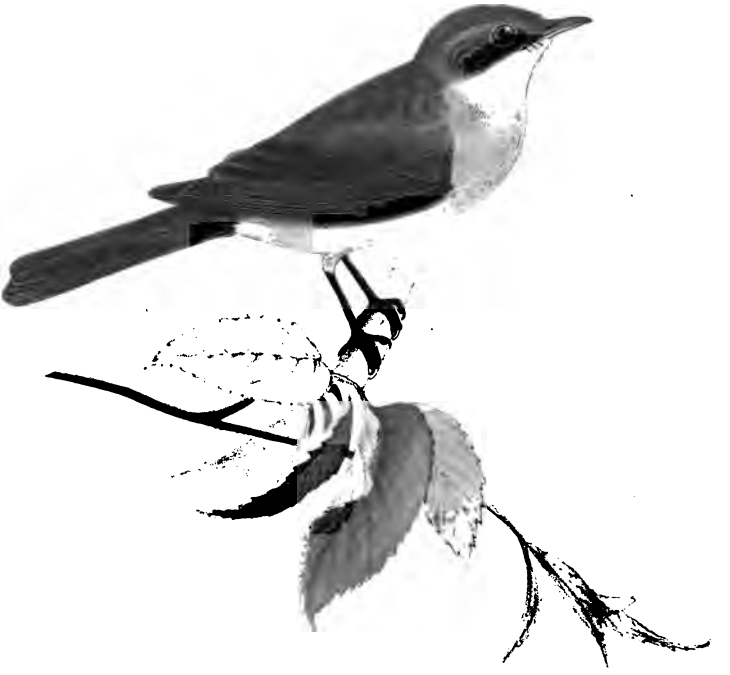

Pl. 68.

PLATE LXVIII.

LESSER WHITETHROAT.

SYLVIA CURRUCA.

THIS lively and elegant little bird arrives in England among the earliest of our summer warblers, about the same time as the blackcap. Its presence is soon betrayed by its very peculiar call-note, which it utters continually, and with which it always terminates its pleasing song. This is a shaking double note many times repeated, and most resembles *rucca! rucca!* from which probably has arisen its trivial name. As soon as it has reached its destination, this little bird may be seen perched upon the top of a tree, a leafless one being generally chosen, singing its merry and noisy song, which, beginning with a few soft warbling notes, uttered in a very hurried manner, is usually concluded as before described. The little vocalist all the while is seen frisking and hopping up and down, and snatching from time to time some insect from the naked branches. Its terminating song is uttered apparently with the full extent of its lungs, its little bill wide open, and the feathers of the head and neck set up so erect that the head appears nearly the size of the whole body. Sometimes the song is commenced with a long shrill note, resembling *see-ee!* concluding always with the before-mentioned termination. Whether at rest or in motion the song continues the same at intervals, and is not even interrupted

by its flight from the top of one tree to another, but is continued when on the wing.

In the time of Gilbert White this bird was but little known, but is mentioned by him in the following terms, in one of his letters; "A rare, and I think a new little bird frequents my garden, which I have great reason to think is the pettichaps; it is common in some parts of the kingdom, and I have received formerly several dead specimens from Gibraltar. This bird much resembles the whitethroat, but has a more white, or rather silvery breast and belly; it is restless and active, like the willow wrens, and hops from bough to bough, examining every part for food; it also runs up the stems of the crown imperials, and putting its head into the bells of those flowers, sips the liquor which stands in the nectarium of each petal. Sometimes it feeds on the ground like the hedge-sparrow, by hopping about on the grass-plots and mown walks."

The Lesser Whitethroat is far from being so common as the larger species; on the contrary, it is considered as rather a scarce bird in many parts of England. In various localities, however, in Surrey, we have found it in tolerable plenty, especially in the most wooded parts; and its nests and eggs have frequently been brought to us. It is in this county in far greater plenty than the blackcap. In gardens and orchards, which are usually much frequented by this species, they may often be seen flitting among the fruit-trees in search of insects, especially the green aphides that infest them in the spring; and they also approach close to dwellings, with the greatest seeming familiarity, to seek for similar insects among roses, and other flowering shrubs. This species frequents gardens more than the preceding, which rather delights in lonely hedges and commons, scattered with furze.

While listening to the notes of birds, the truth of an observation made by Rennie has often come in full force to

our mind. "It is, perhaps, too much," he remarks, "to say that we have borrowed all our music from birds; but some of it is evidently a plagiarism." We are disposed to go further than the admission of Rennie on this subject, since in birds we find the only natural musical language. In music they express all their joys, and hopes, and fears. The melody uttered by some of them is enchanting: the variety without end. What can surpass the stately recitative of the blackbird? whose song, when heard in distant woods, sounds like the warning voice of one of the old prophets, preaching repentance to a heedless world. Or who can sing a hymn of praise equal to that poured forth by every lark that rises on the wing.

The vocabulary of some birds is also of considerable extent, especially during the early months of the year, and may by an attentive observer be heard to increase in extent as the season advances. They continue to acquire new notes as far as the month of May, at which time all birds are in the height of their song. From this time their vocal powers diminish, even before they cease to sing. Some appear to leave off abruptly, without the apparent causes usually assigned. At the present time of writing, the 30th of May, we have scarcely heard, for some days, the song of a nightingale which has its nest in our garden, although, contrary to the usual belief that this bird continues in full song during the whole time that the hen sits, the nest has not been completed a week, and two days ago only the fifth egg was laid. We now hear the male bird very rarely, scarcely one stanza in a day, and in the night he is wholly silent. Instead of the incessant song of nightingales, blackcaps, larger and lesser whitethroats, thrushes, etc., which have alternately been heard, for the last month, during every hour of the day and night, nothing is now to be heard but the occasional chant of the blackbird, the monotonous song

of the yellow bunting, the clinking of the titmouse, or the unceasing inquiries of the sparrow upon the house-top, respecting the welfare of his mate, who sits upon her eggs beneath the roof. Even the extraordinary and indescribable notes of the starling are discontinued.

The nest of the Lesser Whitethroat is, like that of the preceding species, slight in appearance, and built of dry stalky materials. The one now before us is composed of a few stems of galium, interwoven with many dead and half decomposed leaves of a long form, probably willow or osier. Several cots of spiders are employed in the outer work, and the inside is thickly lined with fine roots. The eggs are longer in form than those of the larger whitethroat, although smaller in size and differently marked. They are usually white in the ground colour, and the shell is so thin that when fresh the yolk is plainly to be seen, as is the case with many other white eggs. A few large freckles of pale brown are dispersed over the egg, and many dark brown spots of different sizes, and a few hair-like streaks, are scattered unequally over the surface: in some specimens these form a zone round the larger end. Dull ash-coloured spots are also visible in the zone, which we observe generally to prevail in all specimens of the Whitethroat, Lesser Whitethroat, and Dartford Warbler. These eggs occasionally vary in the ground-colour, some inclining to reddish, some to greenish-white.

The nest of this species is usually placed in a low bush, or in a bramble overhanging a tangled hedge, and rather better concealed than that of the larger species. The little bird practises similar curious devices when its nest is approached as before described.

The Lesser Whitethroat is found scattered over many of the counties of England and Scotland, in the most wooded parts; it also visits the other countries of Europe as far

as Russia: it is abundant in Asia, and is supposed to pass the winter in the warmest parts of that quarter of the globe, and in Africa.

The plumage of this species, taken from an adult male specimen shot the middle of May, is as follows:—head and ear-coverts very dark slate-colour, tinged slightly with brown. Eyelids and corners of the gape grey, the feathered orbits surrounding the eyelids a little browner than the rest of the head. The wings and tail are rich dark brown; the outer feather of the tail whitish. The back, scapulars, and upper tail-coverts are slate-colour, tinged with brown. The whole under parts, including the chin and under tail-coverts, beautiful greyish-white. Under coverts of the wing greyish-white. A very slight tinge of yellowish-brown upon the flanks and sides of the breast, beginning below the white of the throat. The beak is dark-grey, almost black, except the base of the under mandible, which is lead-colour. The legs and toes are very dark lead. The iris pale greyish-brown. In young birds, the eyelids and corners of the mouth are yellow.

The entire length of this species is five and a half inches. The wing measures, from the carpus to the tip, two inches and a half; the first quill-feather nine lines, the second is one line shorter than the third and fourth, which are equal, and the longest in the wing. The tail, as represented in the plate, has the middle and outer feathers rather shorter than the intermediate ones. The legs are small and delicate.

In preserved specimens, it is sometimes difficult to distinguish readily the difference between this and the preceding species, when the colours of the legs and beak are faded; but in all states a constant distinction may be found in the first quill-feather, which, in the larger whitethroat, is scarcely half the length of the same feather in the present species.

The egg of the Lesser Whitethroat is figured 68 in the plate.

Pl. 69.

INSESSORES.
DENTIROSTRES. *SYLVIADÆ.*

PLATE LXIX.

DARTFORD WARBLER.

Sylvia Provincialis.

The Dartford Warbler, which was formerly considered a very rare and local species in this country, has, of late years, been frequently found, perhaps because more diligently sought for, in many parts of England. It appears to confine itself entirely to heaths and commons, where it can have plenty of cover. In such a locality it was first observed in England, namely, on Bexley Heath near Dartford; and it has subsequently been found to inhabit similar localities in various other parts of the south of England. We are told by continental authors, of the frequent occurrence of this species in Spain, Italy, and the south of France; but it is asserted not to be met with either in Holland, Germany, or more northern parts. The accounts of its being apparently confined to the southern coast of Europe, appear somewhat difficult to reconcile with the fact of its having been found in England at all seasons of the year, winter as well as summer, and we think that this and many other parts of its natural history require further elucidation. Possibly it does not migrate at all, but may remain stationary in all the above-mentioned countries throughout the year, as some of our little wrens do here.

The great shyness of this species, renders it difficult to

become acquainted with its habits, and with its mode of subsistence during the cold months of winter, when winged insects, which appear to be its food in summer, cannot be obtained. In Surrey we have seen this little bird in several places, such as Wimbledon Common, Burwood Common, the vicinity of St. George's Hill and other parts, generally in the act of flying for shelter, which they do on the least alarm. They are sometimes seen perched upon the upper sprays of the furze bushes, or rising up a few feet above them, singing their little song. On the approach of a human form, they flit from branch to branch, until hidden within the interior of their thorny shelter, whence it is very difficult again to dislodge them, as they creep from one bush to another; and their dark plumage also tends still further to conceal them.

The nest of this species is usually found among the largest and tallest furze bushes, where they are closely matted with brambles, and difficult of access, and can seldom be discovered, except when the birds are building, or in the act of carrying in food to their young. It resembles much in structure that of the whitethroat, and is constructed of similar materials. One in our possession is composed externally of stems of one of the galium family, lined with the long stiff stalks of some umbelliferous plant, and a few long hairs. This nest is so transparent, that on holding it up to the light, the form of the eggs may be seen through it, yet so well put together, that neither a straw nor hair can be taken from within, unless with a sort of violence. Some, which are built with broader grass and a little wool, are more substantial in appearance, and less pervious to the eye.

The eggs of the Dartford Warbler, which measure about nine lines in length, bear much resemblance to the paler specimens of those of the whitethroat. The characteristic zone of ash-grey spots, round the larger end, is very faintly defined upon a stone coloured ground; and the whole surface is equally mottled over with olive brown.

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The entire length of this species is five inches and a quarter. The wings, from the carpus to the tip, measure two inches; the middle feathers of the tail are two inches and a half in length, and extend two inches beyond the closed wings; the outer feathers are nearly half an inch shorter than those in the centre. The beak is of moderate thickness, and measures six lines from the point to the gape. The tarsi measure eight lines.

The whole upper plumage of the adult male is very dark slate grey, darkest on the head and ear-coverts; the hair-like feathers of the back are strongly tinged with olive-brown. The wings are blackish-brown, narrowly edged with rusty-olive; the tertials and greater coverts more broadly edged with the same. The throat, neck, breast, and flanks, are deep ferruginous, the middle of the belly white. The tail feathers are dusky, edged with hoary ash, the two central ones almost entirely of that colour. The beak is black, the base of the under mandible whitish. The iris and eyelids are yellow; the legs yellow.

The female and young differ but little, except in being rather paler.

The egg of the Dartford Warbler is figured 69.

Pl. 70.

PLATE LXX.

CHIFF-CHAFF.

SYLVIA HIPPOLAIS. (MONTAGU.)

THE CHIFF-CHAFF is an inhabitant of the woods, and appears to prefer those whose trees are large and lofty; especially where oak, birch, and aspen trees grow on a surface covered with fern, grass, and other herbage. In very close woods, as of pine and other firs, where the ground is unclothed by vegetation on account of the dark and heavy foliage of the trees above, it is seldom found. In the spring this bird does not wander far from the spot it has chosen; but its singular note may frequently be heard in the same place, and usually appears to proceed from far above our heads. The little singer, on account of its elevation and of its small size, can seldom be seen, as the branches even of a leafless tree are sufficient to conceal it. It is a lively bird and continually in motion. Its note, although it cannot be called a song, is not altogether unmusical. It consists sometimes of only two notes, which have been likened to *chiff-chaff!* whence it has derived its name: but we have heard its cry frequently extended to three notes, each differing from the other, as if it were *chif-chef-chaf!* ringing among the tops of the trees like the chime of little bells.

Montagu speaks of this little bird as the hardiest and most generally diffused of all our summer visitors, and to be found

in all parts of the kingdom where woods or hedges afford it shelter and food. Its note he says is heard long after the hay-bird (or willow-wren of this work) is silent. We have, however, never found it *plentiful* even in places apparently the most adapted to it; we know a few to frequent our own immediate neighbourhood, and but few. With us it is far less common than the willow-wren, if we may judge by the infrequency of its note, and the scarcity of its nest and eggs.

This species appears to avoid low and damp situations, and to prefer hilly country to that which is level. It is mostly found to choose a situation for its nest upon the slope of a hill, among fern, low bushes, and long grass: sometimes it is placed beneath the shelter of the recumbent straggling branches of a bramble, or behind a clod of turf. The shelter of tall trees is mostly sought; but we have found its nest upon the top of a hill, at the distance of many yards from any tree, and hidden only by low bushes of furze. The building-materials of their nests vary according to the locality chosen, and are usually in part constructed of the materials they are placed among, whether fern, moss, or dry grasses; for which reason the difficulty of finding them is much increased.

We usually observe in authors the nest of the Chiff-chaff and willow-wren described as *domed*, but we think a more distinctive word might be used to express their form, namely *hooded*. A domed nest implies a structure entirely covered with a cupola or hollow ceiling; which is indeed the case with the nests of the common wren and the long-tailed tit-mouse, and within which the eggs are completely concealed: but as those of the Chiff-chaff and willow-wren are only partially covered with a ceiling, we think the term *hooded* more significant of their form. A nest of the Chiff-chaff, now before us, is most perfectly in accordance with this term;

being a spherical structure, covered half the way over with materials similar to the rest of the nest, the other half of the upper hemisphere being entirely open, exposing perfectly to view the eggs within. This description, we believe, will generally accord with the nests of the two last-named species; although varieties doubtless occur, modified by circumstances.

The Chiff-chaff is considered one of the earliest of our summer birds of passage in its vernal migration, and among the last to leave this country in autumn. We are not, however, aware whether this species breeds sooner than others, in conformity with its early appearance; but we do not remember to have met with its eggs before the middle of May. In the middle of June we have found the young birds partly fledged. On the third of that month, passing once along a road shaded by lofty oaks, we heard some small birds making a great deal of noise, as if much disturbed by our presence. On stopping to watch, we saw a little pair of this species flitting among the lower branches of the trees, and alighting upon the palings of the adjoining park. One of our young companions climbed the steep bank at the side of the road to search for their nest, which it was evident must contain young ones, as one of the old birds had food in its bill. The old birds continued to fly over our heads, uttering continually their alarm-cry, *hoo-id! hoo-id!* and occasionally fluttering just above the person of the climber, as if they would by their presence protect their little ones from harm. The anxiety of the parents, which increased as their treasure was approached, caused the nest to be presently discovered. It was near the top of the bank, about eight feet above the road, and bedded in its mossy side among long grass and brambles: only the mouth of it was visible, within which lay seven young birds, partly feathered. The plumage of these little nestlings was greenish brown above, and dull rufous white beneath. After a few days we passed by the spot

again, and all were flown. The nest, which we now secured, was built of dry grasses and green moss, and lined with a few long hairs and a great profusion of feathers. It was hooded over with the same materials; the hood as fully lined with feathers as the cradle part itself.

The eggs of this species, which are very small and delicate, are somewhat short, pointed at the smaller end, and very round at the larger: they have a very thin shell, with but little polish: the ground colour is white, with very fine spots and dots of a blackish red or purple brown, chiefly disposed at the larger end, and sometimes confluent in the zone; they vary very little either in shape or colour. Incubation lasts thirteen days, during which time the male relieves the female occasionally. The young ones are fed with little caterpillars, flies and other insects: they leave the nest early. If the young birds are taken out of the nest and placed upon the ground, the old birds, we are told, will hover over them, and even come and sit beside them. We have witnessed the same thing in fly-catchers, when we have taken young birds that could not fly, out of the nest and placed them upon the grass; the old birds have come down to them and fluttered over them, as if trying to tempt their young to follow them. Indeed, the solicitude of birds for their young is truly beautiful and interesting: we have seen the nightingale, one of the most anxious of birds, pursue and buffet persons who approached too near the bushes in which her young ones were concealed; in the same manner as swallows and martins will fly close to, peck at, and buffet a tame owl which happens to show itself abroad by daylight.

In this species the tints of the plumage vary very greatly at different seasons. In autumn, after the annual moult, their plumage is as follows:—The head, back and scapulars, and the upper coverts of the tail are brownish olive: the quills and tail-feathers are blackish grey with olive green borders;

the two outer quills and the side feathers of the tail have whitish edges. The edge of the wing and the under coverts of the same are pale yellow. From the nostril extends over the eye a pale yellowish brown or ochre streak; the space between the bill and eye is grey: the cheeks pale brown. The throat, breast, and flanks are pale brownish yellow; the yellow, on close examination, is, on the breast, chiefly disposed in longitudinal streaks: the belly is dirty white. In this plumage the bird has much the appearance of a willow-wren, but the colours are less clean, the olive above being more tinged with brown, and the under plumage of the body not so clearly white and yellow; the former being sullied with dull grey, and the latter colour tinged with ochre. The iris in this species is dusky, the legs dark brown, and the soles of the feet yellowish. The beak is brown, the base of the under mandible flesh-colour, the gape yellow.

In the plumage of the spring and summer, when these little birds are seen building their nests, or attending their young, their colours are so different that they can hardly be detected as the same birds. At these seasons, the green and yellow tints have entirely disappeared: the upper plumage has a uniform tint of mouse-coloured brown, and the under parts appear only dull greyish white, slightly tinged upon the breast with ochre. The male and female are almost entirely alike; the latter a little smaller in size. The young birds resemble their parents in their autumnal dress.

The entire length of the Chiff-chaff is four inches and a half. The bill measures from the forehead nearly four lines. The wing is two inches and a quarter from the carpus to the tip, and the tail extends about nine lines beyond the wings when closed; the third and fourth quill feathers of the wing are the longest. The tarsi measure about three quarters of an inch. The beak is thin, the tip of the upper mandible slightly notched, the nostrils oval, the gape beset with bristles.

The Chiff-chaff is considered by Jenyns to be the *Sylvia rufa* of Temminck, a species widely dispersed over the Continent of Europe, being found in all the southern countries of that quarter of the globe, in some of which, namely Italy and Greece, it remains all the year. Some few are believed to remain in England occasionally through the winter, as they have been met with in the southern counties at all seasons.

The egg of the Chiff-chaff is figured 70.

Pl. 71.

PLATE LXXI.

WOOD WREN.

SYLVIA SIBILATRIX. (MONTAGU.)

THE WOOD WREN is found in many parts of England and Wales, but appears not more common than the chiff-chaff; and is far less frequently met with than its congener the willow-wren. Its partiality for country of a peculiar character, renders it local. Like the preceding species, this is also a frequenter of wood and forest scenes, and delights in hilly districts clothed with ancient trees; particularly, as observed by White, where beeches most abound: it is also frequently met with in fir, oak, and birch woods. This is a lively and restless bird, but lonely and unsociable in its habits; and in the spring, soon after its arrival here, it is more often heard than seen, its singular note betraying its presence when the deep foliage, in which it usually resides, conceals it at that season from the observer. But in summer, when constructing its nest or feeding its young, a sight of it is more easily obtained. The usual station of the male is among the upper branches of a lofty tree, from which may be heard its sibilous note at frequent intervals; this note is heard from time to time throughout the summer, and as in the time of incubation the male does not wander far from the spot where his mate is sitting, the vicinity of the nest may be sometimes ascertained by this means. The nest

itself is, however, so well concealed, that except when the birds are passing in and out with materials for building, or with food for their nestlings, the exact spot occupied by it is not detected without great difficulty. The situation chosen for the nest is usually the slope of a hill, shaded by lofty trees, where the rays of the sun are not too much excluded to admit the undergrowth of rich grass and moss, and other similar productions: the twisted roots of a tree sometimes afford in their cavities a convenient shelter, if covered with moss or other low herbage; or a moist and mossy bank.

All naturalists agree in describing the nest as so placed and bedded among the surrounding herbage: the nest itself is also spoken of as hooded over the top, like those of the willow-wren and chiff-chaff, and commonly composed of materials similar to those among which it is placed; such as dead grasses, moss, or fern. The nest is skilfully but not very thickly woven, hooded over, but sufficiently open for the eggs to be seen; the interior is very neatly rounded and deep, lined with the seed panicles of grass, horse-hair, wool, or feathers. The eggs are from five to seven in number, short in form, being almost round; the shell delicate and but little polished. The ground-colour is white, thickly seeded over with dark violet or purple spots, intermixed with pale grey dots, which form a zone round the larger end. In their colouring these eggs differ entirely from those of the two nearly allied species, the *S. hippolais*, and *S. trochilus*, but agree with them usually in the roundness of their form.

The hooded form ascribed to these nests does not, however, appear to be an invariable character, as we have lately met with a nest which we cannot doubt to belong to this species, in which no appearance of a hood could be traced. This nest was taken on St. Anne's-hill in Surrey. It was situated upon the brow of that beautiful hill, near a grove of tall trees. No doubt can exist of its belonging to the present

species, as the bird was sitting on her nest when observed, and the distribution and colours of her plumage were distinctly seen. The nest was placed among the dead branches of an old bramble, shaded above by living stems of the same, in a wild hedge-bank overgrown by honeysuckles and other luxuriant vegetation. The nest, which was very near the surface of the bank, although not resting upon it, was composed of tufts of dry grass with their roots and seed tops, and lined very thickly with fine fibrous roots and a few horse-hairs; it contained four eggs. These are greenish white in the ground-colour, sprinkled over the whole surface with pale reddish brown; a zone of dark grey spots encircles the larger end, and many darker spots of rich brown are mingled with it, and scattered over the rest of the egg. These eggs are of a roundish form, and measure in length seven and a half lines. They weighed when taken about twenty-two grains each. The nest much resembles in size and appearance that of a whitethroat, being but little thicker in substance; but differs in being so thickly lined with roots, and in not being constructed with galium, which almost invariably enters into the composition of the whitethroat's nest. It is singular, that at the time this specimen was taken, another exactly similar in materials and appearance was observed placed on the ground beneath the same bush, a nest of the previous year.

The call-note of this species, which greatly resembles that of the chiff-chaff, is a soft piping note; *hoo-id* or *hwid! hwid!* The same note is also used as the alarm-cry when the nest is approached. This alarm-note, or cry of solicitude, appears common to several birds: it is similar to that used by the nightingale as soon as her young are hatched; but with this last species it is always accompanied with their croaking note, *kurrrr!* Besides this note, the Wood Wren has another peculiarly its own, which distinguishes it from

other birds; this is a note repeated several times, beginning slowly, and rapidly increasing in utterance: it may be tolerably expressed by the monosyllable *dwee!* or *djwee!* It seems not without considerable exertion that these sounds are uttered, as the little singer may be seen with its throat inflated, the feathers of the head and neck erect, the wings drooping, and the little beak directed upwards and vibrating with the jarring expression of the notes thus disengaged. These sounds are uttered with much strength, and may be heard at a considerable distance. This species has been called "the Shaking Bird of the Woods," a title expressive at once of the chief part of its history.

The Wood Wren is in size considerably larger than its two little congeners. On a cursory view, it much resembles the willow wren in its autumnal plumage, but the relative proportions of its wings and tail distinguish it in all states.

The whole upper plumage of this bird is clear olive green, including the head, nape, back, scapulars and upper coverts of the tail. The wings and tail are brown, each feather bordered with a narrow yellow edge: the tertials are more broadly bordered with yellowish white; and the green colour of the back extends over the sides of the breast. A brown line extends before and behind the eye, above which is a streak of bright yellow: the cheeks are yellow, tinged with brown and green. The chin, breast, and flanks are bright yellow, softening into the purest white on the lower part of the breast, belly, and under coverts of the tail. The beak is pale brown, the edges and inside of the mouth ochre yellow. The legs and feet are brown. The upper and under coverts of the tail are very long, and cover three fourths of it. The feathering of the whole bird is very fine and silky. In their plumage, the male and female are exactly alike, except that, when compared together, the dark eyestreak is in the female scarcely so well defined. The iris is rich brown, and the orbits surrounded with yellow feathers.

The young nestlings resemble the parents, but, on account of the loose texture of their feathers, their colours are less distinct and perfect.

The entire length of the Wood Wren is five inches and a quarter. The beak measures four lines and a half, the tarsus nine lines; the tail-feathers measure two inches, but extend only eight lines beyond the closed wings: the tail is slightly forked. The wing measures from the carpus to the tip three inches; the first feather is short, the third the longest in the wing.

On the Continent of Europe the Wood Wren is well known, but is not considered to be anywhere plentiful: it is found in France, Holland, Italy, Switzerland, and Germany, and extends as far north as the middle of Sweden. Its residence in Europe is not so prolonged as that of many other summer birds, as it arrives seldom before May, and departs in August or September.

The egg of the Wood Wren is figured 71.

PLATE LXXII.

WILLOW WREN.

SYLVIA TROCHILUS. (MONTAGU.)

THE WILLOW WREN is much more numerous as a species than either the chiff-chaff or wood-wren, and, being apparently less shy, it is frequently seen and heard. It is also less local in its habits, and consequently more generally diffused. It may frequently be seen among the lower branches of the trees, on which account it comes more readily within the range of our observation. It may frequently be seen by river sides, especially in autumn, sporting among the osiers and willows that overhang their banks: these localities it appears much to delight in, probably on account of the plentiful supply of insect-food that is to be found near running water. This species is not, however, confined either to willows or their neighbourhood, as its sweet song may be heard in woods, groves, underwood, and hedgerows, on plains or hills indifferently. The familiarity, or disregard of the human race, to be observed in this species, is remarkable: we have often seen it approach within a few feet of us when no attempt was made on our part at concealment. On such occasions we have observed it running up and down the stems and branches of the trees, as if in search of insects, and flitting from one to another, singing the whole time its very lovely song. This little species has been termed the "Liquid-

Pl. 72.

noted Willow Wren: its voice is, in our opinion, one of the sweetest among birds; in fact, in the quality of its tones it cannot be surpassed. Although of such diminutive size, this little bird sings as loud as the redbreast, and apparently with great ease, and without raising its feathers or swelling its throat perceptibly. Its song consists of fourteen or fifteen syllables, and is comprised within the compass of about five whole notes of music. It commences with the highest and gradually descends, repeating each note several times. Its voice is clear, full, sweet, and flutelike; but it appears incapable of varying its song, as it is always to be heard in the same form. To the curious in these things, the following representation may be acceptable; the song begins hurriedly and ends very slowly; it seems to express, *Dididide, deay deay, duay duay duay, deay deay, duay, deda deda daa da!*

When captured, this little species appears quite unconscious of fear: one that we surprised upon her nest, and put in a cage, ate immediately all the insect-food that was offered her, and appeared to take not the smallest notice of us or of her captivity: she would not, however, recognise her nest and eggs; had the young been hatched, her parental feelings would perhaps have been aroused. These little birds bear confinement very well, and may be kept for one or two years. They readily take to artificial food, such as bread and milk, if tempted with a few green aphides scattered upon it, and well repay the care bestowed upon them, as the male sings incessantly. An ingenious method of inducing fresh-caught birds to eat artificial food, has been communicated to us, which appears reasonable. Great difficulty is generally found in inducing strange birds to eat what they are unaccustomed to, unless they can be made acquainted with it by stratagem. For this purpose two or three living meal-worms must be put into a tumbler-glass, and set in a plate or saucer: round the bottom of the glass must be strewed

the artificial food, bread and milk or German paste: the bird at sight of the mealworms will approach the glass, as all small birds are fond of those insects, and attempt to peck at them; in so doing it will inadvertently taste the artificial food, and by degrees acquire a relish for it. But if a fresh-caught bird is stubborn and refuses to eat it, as the most intelligent kinds frequently do when taken full-grown, the only plan to be pursued is to feed or cram it, as it is termed; this must be done at least once every hour, and if it be an insect-eating bird, raw meat and chopped egg are the best things that can be administered: at the same time the captive must be kept in a darkened cage. This course should be pursued for at least two days, after which the above-mentioned plan may be practised with success. Insect-eating birds should be occasionally indulged with a mealworm or two, as they are thought to keep them in health; but, as a constant article of food, these are not sufficiently nourishing for captive birds.

The Willow Wren is restless and lively, and its flight from tree to tree is wavering and irregular. Its call-note is *hewid!* and during the spring it utters a delicate chirp, which seems to be a note of endearment to its mate. It arrives in this country about the beginning of April and returns in September; it seldom however sings after July. This species is met with all over Europe; from Sweden, Finland, and Russia, to the most southern parts. It is also common in North America.

The food of the Willow Wren is entirely insects, such as flies, gnats, aphides, small spiders, &c. When the weather is cold and wet in the early spring, it may be seen on the ground in search of insects, and in autumn occasionally eats elder-berries; but neither these birds nor their two predecessors in this work, enter gardens for the sake of their fruit. If they ever approach near to human dwellings, which they do in retired spots, it is to pick off insects from the fruit-trees.

This species builds its spherical nest either on or very near the ground, choosing a situation where the ground is well covered with some low vegetation. It is sometimes sheltered beneath the branches of a felled tree, or beside a clod of earth, and is in most cases built to harmonize with the surrounding herbage, and hooded over with the same materials, like that of the chiff-chaff. Sometimes it is well concealed; but we have found specimens in which the eggs could plainly be seen in passing. It appears as if in a sheltered spot less care was taken to conceal them; while in a more open situation, such as the hollow of a cart-rut, the nest is sometimes found almost entirely closed, like that of a field-mouse. The structure is tolerably firm, composed of dry grass, moss, dead fern, or leaves; the interior round and deep, lined with horse-hair, wool and large feathers. The feathers chosen are usually those of the partridge, pheasant, or pigeon, and in the vicinity of a farm-yard the feathers of domestic fowls are frequently employed. In the latter end of April, the eggs may be found six or seven in number: they are rather round in form, the shell a little polished, and sprinkled all over with rust-coloured faint marks on a cream-coloured ground. There are supposed to be two broods in the year, the first of which is hatched in the beginning of May. In many nests of the Willow Wren that we have seen, no perceptible difference in the colour or form of the eggs has been observed.

The colours of this delicate little bird are, on the upper parts olive brown, including the top of the head and nape, the back, scapulars and upper coverts of the tail: the greater coverts of the wings and the tertials, hair brown, bordered a little lighter: the quill feathers of the tail and wings, and the secondary quills are brown, with the edges a little lighter. The tail is slightly forked. The wing has the first feather about six lines in length; the second, three lines shorter than

the third and fourth, which are the longest in the wing. A dusky line passes from the base of the beak through the eye, above which is a pale yellow streak; the feathered orbits of the eyes are consequently pale yellow above and below the eye, and dark at the corners. The throat and breast are strongly tinged with yellow upon a white ground, which passes into pure white upon the belly; the flanks are tinged with brown, and the under tail coverts with primrose yellow. The feathered ridge is yellow: the under wing coverts and edges of the quills beneath, silvery white; the rest of the under surface of the quills and tail greyish brown. The cheeks and sides of the neck are tinged with brown. The eye is brown: the beak pale brown edged with ochre yellow: the legs yellowish brown. In some specimens the legs are silver grey, with the soles of the feet buff yellow. After their autumnal moult, the green and yellow tints upon the plumage of these birds is more perfect.

The male and female are very nearly alike: the male a little the yellowest upon the breast.

The young birds are still more yellow after the autumnal moult than the parents, and remain so until after their return in the following spring, their upper parts being olive green, their under parts pale sulphur yellow, with white bellies: their beak and legs inclining to flesh-colour.

The entire length of the Willow Wren is five inches and a quarter. The wing measures two inches and a half from the carpus to the tip: the tail feathers measure two inches, and extend one inch beyond the end of the closed wings. The beak measures four lines from the forehead, and is very sharp-pointed: the nostrils are oval. The legs measure nine lines, and are very slender and delicate.

In these birds the adult moult in July, and the young in August.

The egg of the Willow Wren is figured 72.

70.

71.

72.

We have more than once met with a hooded nest, placed upon the ground, and answering in every respect to those of the Willow Wren or Chiff-chaff, but of which the eggs cannot be referred to any known English bird. One of these nests, a most perfect specimen, was taken by us lately on St. Anne's-hill in Surrey. It was placed in a bank by the road side, and so entirely concealed in the exterior part by the moss and dead grass of the bank against which it rested, that it would probably have passed unnoticed, had not the bird discovered it to us by flying off. On approaching the spot, three eggs were plainly to be seen in a nest rather deep, and hooded half the way over only. The bird as it flew off had much the appearance of a Chiff-chaff or Willow Wren, both of which inhabit that locality, but could not be very distinctly seen. We were obliged unwillingly to possess ourselves of the nest without knowing more of its owner, as the place is frequented by many persons, including cow-herd boys, who would soon no doubt have made the nest their own. The eggs differ in all respects from those of the three species last described, in shape, size, and colour: and no other British bird is supposed to build a hooded nest upon the ground. The eggs are white, but with so thin a shell that the yolk gives them an appearance of reddish flesh colour: they are thinly sprinkled, chiefly about the larger end, with large and distinct spots of pure rust; and are of a long egg-shape, measuring eight lines and a half by five lines and a quarter. The nest is rather large, and built of extremely fine dry grass, dead fern, and green moss: it is lined with fine roots, a few hairs, and a very few downy black feathers.

A nest similarly constructed, and containing one egg of the same form and appearance, has been in our possession several years, marked "Unknown."

PLATE LXXIII.

GOLDEN-CRESTED WREN.

Sylvia auricapilla.

The elegant and lively little bird, which forms the subject of the present plate, is one of the smallest of European birds; but although of such diminutive size, this little species usually braves the cold of winter in this country with impunity, and apparently with indifference. In the coldest weather, in winters of ordinary temperature, they may frequently be seen on the sunny side of a fir-tree, busily employed in searching among the branches for the larvæ of insects secreted in the crevices of their bark; and so earnest are they in the search that they will suffer themselves to be approached, and appear to take very little notice of being observed. They frequently even sing at this season. On the 16th of February, 1843, the coldest day of that spring, we heard a little individual, of this species, singing loudly and merrily in an evergreen shrub, as if in perfect enjoyment. The weather was so severe at the time, that the waters of a neighbouring pond were thickly covered with ice, and many boys were exercising themselves in sliding upon it, and the whole country resisted the impression of footsteps. Although thus capable of enduring the ordinary cold of our climate, these little creatures suffer when a winter of unusual rigour and long duration occurs: at such times they have been found dead, in holes in banks, or hollow trees,

Pl. 78.

several clustered together, as if they had in vain sought, as their last refuge, the warmth that might be communicated by such a device.

To our own indigenous birds of this species are occasionally added large flights, which arrive in autumn from more northern parts; an instance of which is recorded by Selby, to have taken place on the 24th and 25th of October, 1822: and it is probable that many do annually resort here for the winter, as their numbers are frequently observed, in the north of England, to increase suddenly and considerably.

On the occurrence of a winter of unusual severity, this little species has been known to abandon Scotland, and the north of England entirely: such a circumstance has been recorded, in the memoirs of the Wernerian Society, to have taken place early in the spring of 1833; and to so distant a point did they appear to have continued their migration, that not a single pair was observed in their accustomed haunts until the following October, the usual time for the arrival of autumnal migrants from the north. These birds are found to reside permanently but little further north than our island; they are said to remain in the Orkneys, and are also found to reside in some parts of Germany throughout the year. In hardiness they have, however, the advantage of the redbreast, which leaves these parts in winter.

The summer migration of the Golden-crested Wren is extended northward, as far as the Arctic regions. They are found in Sweden, Norway, Denmark, and Russia, and from thence to the most southern parts of Europe: they also extend eastward to the utmost bounds of Asia. They seem to prefer northern and temperate parts, and are reared in great numbers in the pine forests in the north of Europe. In September and October their migration southward commences: they migrate in large flocks, as may be ascertained by the great flight mentioned by Selby, which was traced

through the whole extent of the coasts of Northumberland and Durham. In their migratory flights, these little birds often associate with the titmice, with whom they have in manners and habits many points of resemblance. In March and April this little species retires again towards the north for the summer months.

The Golden-crested Wren is generally diffused over England, especially in fir woods and plantations; and so strongly is it attached to trees of the fir kind, that it is seldom to be seen in any other; their attachment to trees of this class appears not only on account of their affording shelter at all seasons, which some other evergreens do equally, but the scaly bark of these trees seems to abound with the insects most suited to them; they also feed upon the small seeds of some kinds of fir, which have been found in their stomachs.

These birds are found equally in wild and in cultivated districts, the attraction being always fir-trees; they fearlessly approach houses where such temptation offers, and are often seen in winter to frequent evergreen roses, and other climbers upon porches and trellices in search of insects. They are occasionally seen upon heaths among furze bushes.

In manners these little creatures are restless and lively, gentle, and confiding, exhibiting no signs of fear either when at large or caged. They are fond of society, and are often seen in company with titmice, especially the crested, where this abounds, whose attachment to fir woods is equally strong. The presence of this little bird may often be detected by its note *tzit! tzit!* and when several are together feeding and flitting among the upper branches of a tree, the frequent uttering of this little syllable sounds like whispering. They have, besides, a call-note, resembling *see!* or *shree!* which is very shrill, and not unlike that uttered by the redbreast.

The restlessness of this little bird is so great that it is seldom to be seen but in motion, flitting from branch to

branch, unless when it hangs beneath a fir-cone, pecking at the seeds, or when it sits still for a minute, singing its short and hurried song, which it always seems to utter impatiently and out of breath. In hopping from branch to branch this little species keeps its body in a horizontal position, with its knees bent, but when about to deliver its song it erects itself, and at the conclusion hurries away. "It may occasionally be seen," observes a friend, "hovering, or poising itself upon the wing in pursuit of its ephemeral prey, as the tropical humming birds are said to flutter and attach themselves in a pendant posture, by clinging about the blossom of some flowering plant." Although usually seen about the lower branches of fir-trees, these little birds do not confine themselves to such, as we once shot a Golden-crested Wren from the top of a very lofty elm. The injury it received was slight, and the body of the little creature so light and buoyant, that it came to the ground alive, and though somewhat stunned by the fall from such a height, it presently recovered itself, and was put in a cage with other birds. Here it manifested no sign of fear, and ate readily small aphides, and such other insects as we could procure, and was so perfectly fearless that it suffered its portrait to be quietly taken, and even ate insects from our hands; but as these little creatures are so delicate that the least injury destroys them, it scarcely survived its wound four and twenty hours. When taken under more favourable circumstances, these birds may be preserved alive for a year or two with care: they should be placed several together in a cage, as they dislike solitude, and pine if left without companions.

The little Golden-crested Wren has a pleasing song, short, and hurried, but clear and delicate. It is often heard as early as February, sometimes earlier.

This little bird is the only one among all the British tribes that forms a suspension nest, with the exception of its near

relation, the fire-crested wren, and the golden oriole. It is usually found suspended beneath the extremity of a branch of larch, or spruce fir, chiefly the latter, to the fingers or forks of which the nest is attached.

To commence this pendant cradle, the little architect first attaches a few long grasses to the three or four forks she intends for its support, weaving them securely around their stalks, and forming with them festoons for the outline or frame. Within this skeleton cot she then proceeds to place moss and wool, and other light materials, interwoven with the cots of spiders; and it is then thickly lined with small feathers. The form of this little nest is spherical, and the opening almost invariably at the top. In its general appearance and neatness, it much resembles the nest of the chaffinch; it is about four inches wide on the outside, and two within, and between two and three inches in depth; the brim is drawn in, or narrowed a little, which, together with the depth of the nest, affords security to the young in their otherwise perilous situation, and the horizontal branches of the bough to which it is attached, form concealment and shelter to the whole. So small is this little structure, and so well concealed by its position and the colour of the materials employed, that unless placed in a very conspicuous spot, its chances of escaping observation are sufficient to ensure its general safety. Yet a danger of another character sometimes assails it, from which neither the depth of the nest, nor the apparent security of its position can entirely defend it; namely, a rough and boisterous gale of wind, which, by waving to and fro the supporting branch has been known to dislodge the eggs from their cradle.

The eggs are from six to ten in number, small and delicate, scarcely exceeding peas in size, and measuring frequently not more than six lines in length, and from that to seven and a half. In surface they are mostly without polish; the ground

colour is cream, or sullied white; some are mottled all over with a darker shade of the same colour, and in others the spots are confined to a zone at the larger end. The young are fed by both parents, who are indefatigable in their task; they remain in the nest until they can fly. These Wrens breed early, and are believed to produce two broods in the season; the late broods are seldom so many in number as the early.

The entire length of the Golden-crested Wren is three inches and a half. The wing, from the carpus to the tip, measures two inches; the first quill-feather is less than half the length of the second; the second is two lines shorter than the third, fourth, and fifth, which are equal, and the longest in the wing. The bill measures three lines and a quarter from the forehead to the tip; the nostrils, which are oval, are entirely covered by two stiff bristly feathers, of great beauty, directed forward. The tarsus measures seven lines, and the tail extends nine lines beyond the tips of the folded wings.

The plumage of this species is olive-green on the upper parts of the body, including the sides of the head and nape, the back, scapulars, and upper tail-coverts; the feathers on the lower parts of the back are the lightest, inclining to greenish-yellow. The quill-feathers of the tail and wings are purplish-brown, bordered with yellow, except near the base of the secondaries, where the omission of the yellow borders causes a dark spot; the larger and smaller coverts are purple brown, bordered with yellowish-green, and each feather tipped with a large white spot, forming two bars across the wings. The iris is dark brown, the eyelid black; the eyes are surrounded by a pale dusky ring, around which extends another circle of dull white; the ear-coverts and forehead are pale yellowish-grey. The chin, and all the under parts are sullied white, tinged on the flanks, and still more strongly on the breast with rufous yellow. The legs and feet are orange-

brown. The top of the head is ornamented with a brilliant crest of elongated feathers of a rich orange colour; this colour is bordered on each side with a stripe of deep black feathers, whose inner webs are pale lemon-yellow. The female perfectly resembles the male in the distribution of her colours, but her crest is paler, and inclining to yellow.

The young birds of the year in autumn resemble their parents in the distribution of their colours, but the green on their upper plumage is strongly tinged with grey, especially about the sides of the head: they are also smaller in size. The beak in adult birds is black: in young ones the base of the under mandible is horn-colour. It is thin and awl-shaped, broad at the base, and narrow towards the tip.

The egg of the Golden-crested Wren is figured 73.

Pl. 74.

PLATE LXXIV.

FIRE-CRESTED WREN.

SYLVIA IGNICAPILLA.

THE separation of this little bird, as a species, from the golden-crested wren was first made by a continental naturalist, M. Brehm, who communicated his observations to Temminck and other ornithologists; since which period a few specimens have been recognised in England at various times. On the continent of Europe, this species is tolerably common in some parts, although less so than its little congenor. The Fire-crested Wren is considered to be most abundant in France and Belgium, but it is found also in Switzerland and in Germany; and it is an inhabitant of North America. Like the preceding species, they remain in Europe, and probably in England throughout the year. They do not, however, winter in Germany; but Temminck says they are constantly to be seen in France in winter, and inhabit the "Jardin du Roi" in Paris at that season.

In manners and habits this species nearly resembles the more common one, the golden-crested wren. Like it, also, this is chiefly found among woods and forests of pine and other firs, and in gardens where such trees abound: its food is the same, and in the localities it frequents there is no distinctive difference. This species is, however, more shy than the gold-crest, and does not associate in such large com-

panies, either at ordinary times, or during migration, being seldom seen more than six or seven together, probably the little family of the year. It is not found so far north as the preceding species; and its times of migration are observed, in parts on the continent where it is well known, to be later in the spring and earlier in the autumn.

These little birds are remarkably restless and continually in motion. The male and female, which are usually seen together, are so much attached to one another, that if one is shot or captured, its companion remains on the spot for a considerable time, uttering continually its call-note. The notes of this little species are said to differ in tone from those of the common golden-crested wren, so that by an accustomed ear they may be readily distinguished.

The number of eggs in this species is from six to eight: they vary in size and colour, as in the former species, which they greatly resemble, being reddish or cream-white in the ground colour, minutely speckled with yellowish-grey about the larger end; they are in size from six to seven lines in length. The nest is built of moss, wool, and a few supporting grasses, and lined with the down of animals and small feathers: it is suspended from a fir-branch in the same manner as that of the gold-crest, and is found in similar localities.

The Fire-crested Wren varies in length, from three and a half to four inches. In a specimen measured by us the dimensions were as follows: the beak from the forehead nearly four lines: the wing from the carpus to the tip two inches one line: the first quill-feather is short, the second two lines shorter than the third; the fourth and fifth are a trifle longer than the third, and the longest in the wing; the tail, which extends about three quarters of an inch beyond the folded wings, is slightly forked: the tarsi measure nine lines.

The chief distinguishing marks of this species are the black

streaks across the face, which have procured for it in France the expressive names of "triple bandeau," and "roitelet à moustaches." These three black streaks are thus disposed: the first extends from the base of the beak to the nape, passing through the eye; the second from the forehead to the back of the head, and bounds the orange crest; the third proceeds from the corner of the mouth and passes beneath the ear-coverts. Between these longitudinal black streaks are two white lines, the one above, the other beneath the eye. The crest is flame red, and the forehead yellowish-brown. The iris is dark brown, the beak black, and the inside of the mouth and tongue orange colour. The legs and feet are yellowish-brown, the soles yellow and rough. The upper plumage is yellowish-olive, including the back and scapulars; the nape and sides of the neck are tinged with ash. The wings and tail are dusky, slightly bordered with yellow; the tertials are more broadly bordered with yellowish-white, except towards the base, where their outer web is dusky black, forming a dark spot. The coverts of the wings are dusky, broadly bordered with greenish-white. The under parts are greyish-white, strongly tinged upon the breast and flanks with buff colour. The under coverts of the wings are pale grey.

The female nearly resembles the male, but her crest and all her colours are paler and less distinctly marked. The young birds may always be distinguished from those of the golden-crested wren, by the bands across the sides of the head. In young birds the colours are more obscure, and the base of the beak is horn-colour. The beak, in this species, is always larger in proportion than in the preceding.

The egg of this species is figured 74.

PLATE LXXV.

WREN.

SYLVIA TROGLODYTES.

THIS well-known species is common throughout Europe, and extends from the Mediterranean as far north as the arctic circle. It is a very hardy little bird, and appears to prefer northern to southern climates. It is quite regardless of the cold of our latitude, and braves the occasional rigour of the winter in this country generally unharmed. In winter it inhabits and shelters itself within holes and caves, among heaps of stones, or hollows formed by the roots of trees, or in the cavernous recesses of old decayed stems. In summer it does not entirely abandon such situations, but appears to have an attachment, at all seasons, for places sombre and lonely. It also inhabits woods and plantations, where there is plenty of sheltering underwood, and low bushes and hedgerows, and is often seen in the neglected corner of a cottage garden. Wherever this little creature resides it is fond of concealing itself, and as the dead foliage and vegetable rubbish, amongst which it often creeps, nearly assimilate with it in colour, it is only to be discovered by its exceeding restlessness. It is a solitary species, never associating in flocks, and seldom, except in spring, to be seen even in pairs.

This light-hearted little bird is lively and intelligent,

Pl. 76.

and readily sensible of danger; on the least alarm it hastens to hide itself from observation with the greatest possible speed: its hops or leaps are mostly executed with the tail erect, and follow in such quick succession that its flight through the intricacies of a bush or hedge has a great resemblance to the running of a mouse. When a bird of prey appears, the little wren often gives the alarm, by uttering rapidly its note of fear, *shrek! shrek!* so quickly repeated, that it sounds like a miniature watchman's rattle; this is usually accompanied with a curtsying, or dipping motion, in the manner of the redbreast.

The flight of the Wren is performed in a straight line, fluttering incessantly its short rounded wings; it seldom performs any longer flight than from bush to bush, or across an open grass plat, and usually near the ground, as if conscious of its imperfect powers.

The Wren sings occasionally at all seasons, but least in the autumn. Early in spring its lively song may be heard suddenly to break forth in a clear and cheerful strain: its voice is very strong for so small a bird, more than equaling in strength that of the redbreast. It appears usually to sing one stated succession of notes, or at most exhibits but little variety. In the performance of its song the whole body of the little vocalist vibrates, the bill is raised and opened wide, the throat enlarged, and the wings drooping. While singing, the little bird frequently sits upon the upper branch of a hedge or bush, and when the song is ended precipitately descends.

This little species rears its young throughout the greater part of Europe, as far northward as Sweden. Its nest is variously placed, and at very different elevations; it is sometimes found upon the ground, and occasionally as high as twenty feet above it, as opportunity offers. In the situation chosen for it great variety also may be observed. Some

are placed in holes in buildings, or under thatched roofs; some among piles of wood or faggots, some in a hay or corn-rick, or among the exposed roots of trees; some are placed against the trunks of large trees, and others upon the ground among fern or brambles. Concealment for their nest does not appear to be much sought after, as it is often to be found beside a high road, where the little builder is disturbed by every passer. One thus circumstanced we have lately seen built in a hole in the top of a low pollard by the river side, in the most frequented spot in the village, where every fisherman and every idle boy was in the habit of passing. The anxiety this appeared to cause to the little birds was extreme; every minute their attention was distracted from their young, and their vociferations were incessant, as if they thought that every one's business and convenience should give place to theirs.

The nest of this species is well constructed and very curious, and remarkably varied in form and structure, to suit the locality selected. When the stem of a tree is chosen, the manner in which the little builder commences the work is exceedingly ingenious. The first indication of the future nest is a slight circular outline traced upon the stem, by means of a few slender grass stalks attached to the rough bark, generally of the elm, which tree appears favourable for such an undertaking, on account of the slender branches, or spurs, that spring at right angles from its stem, and are sometimes used to attach the external parts of the nest to. This slight circle may be observed for some days nearly in the same state, so slow is the progress made in this stage by the builders. By degrees a few more grasses appear within the outline, and a little moss, but these little creatures will seldom suffer any one to see them at work; on the contrary, they jealously watch until any intrusive passenger is out of sight; thus ten days or a fortnight are

sometimes employed in the construction. The nest when complete is spherical, except that the side attached to the stem is flattened. The opening for passing in and out is in the upper half, below the dome, and is nearly closed by the feathers with which it is lined.

The constructing materials of the nest are flexible grass stalks, dead foliage, and green moss, of which the principal part consists. When built upon the ground, the form of the Wren's nest differs considerably, and displays less ingenuity of contrivance, in proportion to the lesser need. A nest of this description in our possession is so much like that of a willow-wren, that it might, if empty, be mistaken for one. It is externally composed of dead fern, with a small portion of long green moss, interwoven with a few long flowering stems of grass, and lined with feathers.

Another nest in our possession, is of less common construction: this is suspended beneath a branch of spruce fir, in the same manner as that of a golden-crested wren; not, however, from the extremity, but from the centre of the branch. It is attached to the foliage of five or six pendant sprays by the long trailing branches of several sorts of wild geranium, or cranesbill, a material well adapted for binding the branches together; long grasses also appear in the structure, and dead leaves of various kinds, together with a little green moss. It is lined with skeleton leaves and a few roots, but no feathers. This nest is fully six inches long externally, and five inches in width. The width within is about three inches, and the depth rather more. The thickness of the nest varies from one to two inches, and in substance it is very firm, especially beneath and around the entrance. This nest contains four eggs, but sometimes as many as eight are found.

The eggs of this species present very little variety, either in form or colour; they measure usually eight lines by six;

they are circular at the larger end, pointed at the smaller. In colour they are reddish-white, but fade to pure white when preserved: minute, dark crimson spots are sprinkled over the surface, and are rather more numerous at the larger end: the shell is very thin and polished.

The entire length of the Wren is scarcely four inches: the wing measures from the carpus to the tip one inch nine lines: the tail one inch two lines, and extends about half an inch beyond the tips of the wings. The beak, from the forehead to the point, is four and a half lines; the tarsi measure seven lines, and the middle toe and claw the same: the hinder toe and claw, which are strong and thick, measure together half an inch. The wing is much rounded; the first quill-feather measures eight lines, the second one inch two lines, the third one inch four lines, the fourth, fifth, sixth, and seventh are nearly the same length, and the longest in the wing. The tail-feathers are even in length, except the outer ones, which are two lines shorter than the rest: the upper and under coverts hide more than half the tail.

The whole upper plumage of this little bird is reddish-brown, marked on the back and scapulars with transverse dusky bars. The coverts of the wings and tertials, and the tail, are rather more rufous in colour, and similarly barred: the quill-feathers of the wings are dusky, barred on the outer web with reddish-white, which gives a tesselated appearance. The under parts are pale reddish-brown, lightest on the chin and throat, and darkest on the flanks and under-coverts of the tail, which are barred with dusky-brown. The legs and feet are light brown. The beak is rather long and slender, and rounded at the tip; it has no perceptible notch in the margin. The upper mandible is dark brown in colour; the under one dark only at the tip, and pale brown at the base.

To show how small in bodily substance this little bird is, we mention the following fact. We once captured a Wren,

73.

74.

75.

and, wishing to observe its manners, designed to keep it for a few days in a large wire cage. Accordingly we introduced the little creature in at the door: it had scarcely released itself from our hand, when we heard it strike itself against a window at the other end of the room. Hardly believing that it could so readily have escaped through the wires of the cage, we repeated the experiment: the result was the same; and we found that this little creature could fly through a cage whose wires were placed at the distance of only five lines, or little more than the third of an inch from one another, without appearing to be even obstructed by them.

The egg of the Wren is figured 75 in the plate.

PLATE LXXVI.

GREATER TITMOUSE.

Parus major.

The present species is the largest of its family, and very generally known. It is distributed all over Europe, and is more numerous in the colder regions than in the warmer, extending as far north as the utmost bounds of the forests. It is also found throughout Asia. In these vast regions the Titmouse is indigenous, and in most of them some are found to remain nearly throughout the year, but the greater part migrate from their extreme northern boundaries in autumn, and their numbers are found greatly to increase in the temperate regions at that season. This movement is caused by the impossibility that these and other granivorous birds find of obtaining a sufficiency of food in the north, when the ground is covered by snow, or so hardened by frost that their chance of subsistence would be small.

In England, their migratory movements are but little perceived, but on the vast continent of Europe and Asia, where the different seasons are far more distinct, the migrators may be seen, during September and October, flying in great numbers from north-east to south-west, apparently hurrying along, as if to overtake one another. It is generally remarked, and with truth, that these birds do not return in spring northward, in such great numbers as they passed southward in autumn, many having doubtless fallen a prey

Pl 76

to men, and animals, and birds of rapine, besides various other casualties. They return during March and April, and from that time are only found in pairs in the woods. In Holland, where these migrations also take place, they are taken in great numbers in autumn, by birdcatchers, when on the watch for other birds.

These birds are found alike on hills and plains, provided the character of the country is sylvan. Their habits are restless and busy in the extreme, and they are very rarely seen sitting still for any length of time; and although they do not want for courage, they have the sagacity to avoid any place where they have met with danger or disturbance, for which reason they seldom construct a second nest in a spot from which their first has been taken, although, when undisturbed, they are known frequently to return, and build again in the hole or sheltered corner in which they have brought up their brood of the preceding year. They fight and quarrel much with their neighbours, even at large, but when caged they are dangerous companions to other small birds, whom they pursue and harass, and on the first opportunity destroy, by striking them on the head with their powerful bills, and then feasting on their brains. The flight of this species is rather laborious, performed in inverted arches, and low when passing only from tree to tree; but they fly higher in the air when on their migratory passage.

The food of the Greater Titmouse consists of seeds, fruits, insects and their larvæ, and, like most other birds, their chief occupation is seeking for it: for this purpose they are indefatigable in their investigations among old trees, which afford so many hidden retreats for them in their cavities and bark. In winter they frequent orchards, much for the same purpose; also farmyards, for the sake of the scattered grain.

The nest of this species is invariably placed in a hole in a tree or wall, or in a crevice of a rock, and its construction

depends much on locality and circumstances, as regards form and proportions. It generally consists of moss, grass, and stalks, and is lined with wool, horse or cow's hair, and feathers, and generally loosely put together. We lately saw a nest of this species, taken under rather curious circumstances. A young companion with whom we were walking, observed that he knew where there was a nest, as he had seen a bird drop from the trees above into a hole, which he pointed out, in a stump imbedded in the bank by the road side. He climbed along the bank to it, and found that the hole, which was in the remains of a felled tree, was too small to admit the entrance of his hand; consequently, he put in a stick to feel what might be within, and, finding something soft, he twisted the stick, in the manner boys do to get a nest out of a narrow hole, and succeeded in bringing up a nest composed of wool and grasses, and having two eggs entangled by the process in its folds. Encouraged by his success, he then with his knife enlarged the hole a little, and put in his hand as far as he could reach, and just within his arm's length he felt more eggs at the bottom; after having succeeded in bringing out eight more, one by one, he felt something running up his arm, and drawing it hastily out, he saw the tail of a bird, which was endeavouring to conceal itself in a side recess in the old stem. The affectionate little creature had, therefore, remained until all her eggs were taken away, and even then would not leave the spot, but suffered herself to be taken prisoner with them, although she might easily have made her own escape. We set the parent at liberty, but thought, after the alarm she had had, it was in vain to replace the nest and eggs with any hope that she would again return to them. This nest is an exceedingly well built one, composed of tufts of dry grass with long flowering stems, and green moss externally, and lined with wool, and hair, and rabbits' down.

The eggs of the Greater Titmouse are of a short oval form; eight lines and a half long, and six and a half broad; they are white, with very little polish, freckled with many pale lilac and reddish-brown spots over the whole surface; rather fullest at the larger end. The young birds, after they can fly, follow their parents for a considerable time, and are carefully fed by them; they may sometimes be seen sitting upon apple and other fruit trees in an orchard, waiting for the expected supply of food; they sit shivering, in the manner of other young birds, with their wings drooping, and uttering a shrill cry, like *shreep! shreep!* The parents, whose note, when so engaged, resembles *tsip!* seek for their food among the mossy branches and curled leaves, and appear to bring them small caterpillars. The young birds may, for some time, be distinguished from the old ones by their smaller size and duller plumage. The roosting places of these birds are usually holes in walls or trees, or beneath the tiles of roofs, where a broken corner gives them admittance, and they often roost several together.

The notes of this bird are various. Early in spring he is heard to say *eeclu! eeclu! eeclu!* and by degrees adds many more words to his vocabulary. Among them are *stitty! stitty!* and *britty! britty!* he also says *sitseeda!* and, when surprised or in fear, pronounces *seeterrrr!* and *pink, pink, pink!* like the chaffinch, but in a louder tone and more frequently repeated, the chaffinch seldom saying it but once, or, at most, twice at a time. But his favourite note is *seedidip! seedidip!* which is pronounced with such rapidity and so many times in succession, that the bird is out of breath, and all his hearers are in the same condition. The notes are all in a high key, sharp and metallic.

The entire length of the Greater Titmouse is nearly six inches. The wing measures, from the carpus to the tip, three inches; the first quill-feather is narrow and pointed,

and less than half the length of the second; the second, which is also rather pointed, is four lines shorter than the third; the fourth and fifth exceed the third a little, and are the longest in the wing. The tail extends beyond the closed wings about an inch and a quarter: the tail-feathers measure two inches and three quarters, and the upper coverts hide about one third of their length. The tarsus measures ten lines: the toes are rather strong, and the claws thick. The beak measures five lines from the forehead, and is strong, thick, and broad; the edges of the lower mandible fit into the upper. The nostrils are covered with strong, bristly feathers.

The piebald plumage of these birds is very striking and handsome: the colours of the adult male are as follows. An entire glossy black hood covers the head; the chin and throat are of the same colour, and a broad black band descends from the throat, down the middle of the belly to the tail. The cheeks are white, bounded by another black band: the sides of the breast and flanks are dull yellow. The back and scapulars are olive green; the lower part of the back and upper coverts of the tail fine bluish-grey; the lesser coverts of the wings the same: the greater coverts are bluish-grey, edged with the green of the back, and broadly tipped with white. The primary quills are greyish-black, edged with fine grey, except the first two. The secondaries and tertials are black, edged with greenish-white. The outer tail-feather is greyish-black on chief of the inner web, the outer web and tip white; the rest of the tail-feathers are black on their inner webs, and slate colour on their outer. The beak is blackish-horn-colour, with lighter edges and tip: the iris is dark brown: the legs and feet are slate colour.

The female is not by far so brilliant in colouring. The white patch on the cheek is less clear; the black on the head and breast is duller, and extends only half way down the

breast; it is also narrower. The young male has the black streak down the breast and belly narrower than in the adult male, but continued all the way. The moult of these birds takes place in July and August.

The characters of the genus Parus are; bill short, strong, subconical, slightly compressed, without any notch; nostrils basal and round, hidden by short reflected bristles; tarsi strong; hinder claw the longest: wings with the first quill moderate, the second shorter than the third, the fourth and fifth the longest.

The egg of the Greater Titmouse is figured 76.

PLATE LXXVII.

BLUE TITMOUSE.

Parus cæruleus.

The present species inhabits all Europe, with the exception of the most northern parts: it prefers moderately hilly to mountainous countries, and frequents leaf-clad trees, in preference to pines and firs. In the spring these birds are seen in pairs, and afterwards in families: towards autumn they collect in flocks, but not in such numbers as the foregoing species. It requires hardly to be mentioned, that the Blue Titmouse remains with us the whole year, and is continually seen in shrubberies close to our windows, particularly during the winter season. They associate much with the golden-crested wrens and creepers; but these are not so familiar, and do not generally approach so near to habitations. In temper the Blue Titmouse is quarrelsome and cruel, frequently biting and pursuing other small birds, with erected crest and attitudes of defiance. Among the branches of trees this little creature is very nimble, climbing and hopping from bough to bough, and clinging in a variety of attitudes: it seldom descends to the ground, all its habits being arboreal. Its flight, when continued to a little distance, is rather unsteady, especially in windy weather.

On the continent of Europe, many of these birds migrate

Pl. 77.

towards the south in autumn; driven from the inhospitable regions of the north by cold and hunger. They begin their course in September and October; and travelling through forests and woods, pass through the centre of Europe. In the spring they return by the same route, and spread themselves again over the north.

The natural food of these birds consists of grain, and insects of almost every description. In spring and summer they principally consume small caterpillars, moths, spiders, etc., and their larvæ, which are found under the leaves, and on the bark of trees. During autumn and winter, their principal occupation is seeking for the concealed eggs of insects, for which they often frequent fruit-trees in orchards; and although in this search some mischief may be done to their buds, this is far more than compensated by the destruction of innumerable stores of eggs, ready to come forth in the first warm days of spring, to commence their much more destructive ravages. Seeds of berries, and the kernels of beech mast, they are also partial to. Nor does this wide range include all that the Blue Titmouse is fond of; for we have often seen it feasting among joints of meat in a village butcher's shop, even in summer when food is plentiful; and on watching for what purpose it came there, we have seen it pick out carefully the fat by preference. Possibly they may also be of service in a butcher's shop, as well as among apple-trees, by destroying the large flies that frequent such places, and the eggs produced by them.

The Blue Titmice are very expert in snatching food from beneath brick or net traps set in winter, and we have often seen them take a piece of bread, or grain of corn, and fly up into the trees with it; on which occasions the sparrows and chaffinches, who are generally too cunning to venture under themselves, sometimes follow, and by their superior strength, take it away from them. The greater titmouse does not suffer himself to be so treated.

In March, or April, the Blue Titmouse begins again to construct its nest in the place it inhabited the foregoing spring, provided it has not been destroyed by the axe of the woodman, or the insatiable demands of the cottager's wife for firewood, the chosen spot generally being a hole in an old dry stump of a tree, or in a branch partly decayed; and usually a few feet from the ground. Old apple or pear-trees, willow stumps, half decayed oaks, etc., are often chosen. The place usually preferred to receive the nest is a hole, narrow at the entrance, sufficient only to receive the bird, but wider within, where it is often scooped out and prepared by the builder itself with its strong and sharp bill. The structure of the nest depends much upon the place in which it is situated: if the hole is small, the nest consists only of a few feathers or tufts of hair; if large, the foundation is of moss, grasses, and wool; the nest is well constructed, and lined with hair. The number of eggs in early nests seldom exceeds eight; and in later, or second broods, seldom more than six are found. It is said that although this bird returns year after year to the same spot to build, it does not for a second brood inhabit the same hole, in which the first, or spring family, has been brought up. The Blue Titmouse is also very tenacious of her eggs, and will scratch and bite sharply any one who is venturous enough to put his hand into the hole where she sits.

The most common note of the Blue Titmouse is *zit! zit!* which it utters very frequently, apparently for amusement; or it may be a sort of family, or gathering note, to keep the little party together; it is continually interchanged among them, when several of these little creatures are seen flitting about and feeding together; it also says *tzitee!* Its true call, or pairing note is *tsee! tsee! tsirrr!* very quickly repeated. There is little inducement to keep birds of this genus in confinement, as they have no song, and no habits

of sociability. This species also requires to be kept alone, and must be provided with a cage entirely of wire, as they soon, with their powerful beaks, destroy wood-work in their incessant attempts to recover their liberty.

The entire length of the Blue Titmouse is four inches and a half; the wing measures from the carpus to the tip two inches and a quarter, and the tail, which measures nearly two inches, extends an inch beyond the tips of the closed wings; the tarsus is eight lines in length; the beak four lines from the tip to the forehead, and in form short and conical.

The variegated plumage of this species is as follows. The crown of the head is blue, lightest near the forehead, and darkest towards the nape, surrounded entirely by a white band; beneath this white band passes a dark bluish-black line, which commences at the nostril, and passing through the eyes, extends to the back of the head; the cheeks are white, bounded by a dark blue band, which commences at the corner of the mouth, and passes backwards to the nape. The feathers of the back and scapulars are glossy canary green. The coverts of the wings are deep bright blue, the larger tipped with white, forming a distinct band across the wings; the quill-feathers are blackish, the secondaries edged with bluish-green, and the tertials tipped with dull white; the tail is blue, and slightly forked. The under plumage is sulphur-yellow; the chin is deep bluish-purple, from which a band of the same colour extends down the middle of the belly; the legs and toes are bluish-grey.

The female nearly resembles the male, differing only in having her colours less bright and distinct, and the dark band down the centre of the body less prolonged.

The young birds have the same distribution of colours, but they are much duller, and tinged with grey. During their first autumnal moult, which takes place in August, the colours of the nestling plumage and the feathering of the adult

are curiously mingled; the cheeks and circle round the crown are yellow, mottled with new white feathers; the top of the head, which in the nestling is greenish smoke colour, is beginning to be speckled with the bright blue feathers that distinguish that part in the adult; the dark eyestreak and collar are smoke colour, and the beak dark horn, edged with white. The young male at this period has but a very slight indication of the dark band down the body, and in the young female it is entirely wanting.

The egg of this species is figured 77 in the Plate.

Pl. 78.

INSESSORES.
DENTIROSTRES.

PARIDÆ.

PLATE LXXVIII.

MARSH TITMOUSE.

PARUS PALUSTRIS.

THE present subject is hardly larger than the blue titmouse, and is short and stout in form, and plain in plumage. The Marsh Titmouse is common throughout most parts of Europe from south to north. In Sweden, Norway, and Russia, it is very common, as also in Holland and Switzerland; and it is found equally in the northern parts of Asia and of America.

In Britain this species is indigenous, and resident throughout the year. During summer their chief resort is underwood, particularly near water or springy spots; they also frequent osier beds by the river side, and are found among tall reeds and water-plants. In winter they are chiefly seen in bushes, plantations, gardens, and orchards, in the vicinity of towns and villages, and approach fearlessly the habitations of men, even among hills and mountains, which they do not so much frequent at other times. These birds are seldom seen in the upper branches of tall trees, but mostly reside in the lower branches, in bushes, or copsewood. Their roosting-place for the night is generally a hole, so small that they can but just enter. In manners these little birds are quick and lively, and appear to be of a cheerful, happy, and affectionate disposition. During the early part of spring a little pair may

be seen to hop about among the branches of a low tree for some time, seeking for food, and when one of them has met with a morsel, it will approach its mate with it, while the other opening its beak and shivering like a young bird, utters the nestling's note and receives the offered donation. This little species is so constantly seen in pairs, that it is believed to choose its partner for life.

Like all other titmice, the monosyllable *tzit! tzit!* is one of the call-notes of this species during all occupations; and from the frequency of its repetition we think it not improbable that this genus has derived its popular name of Tit, or Titmouse. They have also many other notes, such as *spit! spit! dea! dea!* also *ailtz! ailtz!* which is said to be their call in the pairing-season. Many of the notes of the Titmice are highly musical, but their performance of them can scarcely be called a song, as it is frequently confined to two notes, uttered alternately, sometimes slowly, sometimes with great rapidity. The gathering cry of the Marsh Titmouse is of this description; it consists of two notes, of a rich metallic sound, which seem to express *huid-gee*, or *witjee*, uttered many times in succession. Towards the end of summer we have seen little parties of six or eight of this species, flitting together in lofty fir-trees, uttering frequently this metallic cry; and we have noticed that they appear to delight in sultry weather.

The food of the Marsh Titmouse is seeds and insects. During spring and summer they consume innumerable insects and their larvæ, from the leaves and buds of trees, as well as from their branches and bark. In autumn and winter seeds and berries, and the eggs of insects are sought after. The seeds of sunflowers are a favourite food, also hemp-seed, spinach and lettuce-seed, and the seeds of many garden flowers; they will also eat oats, and, like the blue titmouse, they are fond of flesh.

Of all this family none is so pleasing and amusing as the Marsh Titmouse when caged, or kept in a large aviary. When first caught, ants' eggs and elder-berries should be given them, but for a constant food the best is the seed of the sun flower.

The Marsh Titmouse breeds among low bushes and trees of no great elevation, generally near water, in osier beds and willow plantations. The nest is always placed in a hole, at various elevations from the ground; the most frequent place is the crown of a pollard-willow, which is sufficiently soft to allow the little birds to hollow out a place large enough for their nursery. "We have seen it," says Montagu, "artfully excavating the decayed part of that tree, and carrying the chips in its bill to some distance; always working downwards, and making the bottom, for the reception of the nest, larger than the entrance." The hole of entrance is generally perfectly circular, and so small as only to admit the ingress and egress of the parent bird. Under such circumstances the nest consists only of a few hairs and tufts of wool; but if the cavity selected is of sufficient dimensions, moss, and grasses, fibres of roots, and bark, with wool and hair, are carried in, in considerable quantities.

The eggs of this species are from eight to twelve in number, and may be found in May; they are hatched after thirteen days' incubation, in which both parents assist. The young birds are fed with small caterpillars, and the labours of the parents are incessant, in order to supply so many mouths. The parents show great attachment to the young, as well as to each other; as a proof of their affection, if one of a little family is caught and placed in a cage as a call-bird, all the family flock around, and all may successively be made prisoners. Second, or late broods seldom exceed six in number.

The Marsh Titmouse is four and a half inches in entire length: and weighs about two and a half drams. The wing

measures from the carpal joint to the end of the longest quill-feather two inches four lines: the tail two inches two lines; the beak measures three lines from the forehead to the tip, and is conical and very blunt; the nostrils are covered by very stiff, black hairs, directed forward. The wings have the first quill eight lines in length; the second, one inch five lines; the third, two inches three lines; the fourth, fifth, and sixth, exceed the third by about one line, and are the longest in the wing: the tarsi measure eight lines.

The plumage of this little bird, although less striking than that of most of its congenors, is very pretty. The whole head is covered with a jet black hood, which includes the forehead and nape. The cheeks are white, as are also the reflected stiff hairs that extend from the eye to the corners of the mouth: the chin is black. The back and scapulars are rusty grey, lightest on the upper coverts of the tail: the tail and wings are dusky, edged with the colour of the back. The under plumage of the body is dull white, strongly tinged on the breast and flanks with buff colour. The iris is dark brown: the legs and toes bluish-grey. The under coverts of the wings are cream-colour; the under surface of the wings and tail feathers pale slate, with white shafts.

The female and young so nearly resemble the adult male, that one description will suffice for all.

The egg of this species is dull white, without any polish; it is very minutely speckled over with reddish brown spots, chiefly around the zone at the larger end. The eggs of all our indigenous titmice have a marked character, which distinguishes them from those of the wren, the creeper, and the chiff-chaff; they are more unpolished in surface, the markings are paler, and often rough or angular in form, instead of smooth and round. A representation of one will be found figured 78.

76.

77.

78.

Pl. 79.

PLATE LXXIX.

COLE TITMOUSE.

Parus ater.

This species is the smallest of the British Titmice, and one of the most lively and familiar. It is of frequent occurrence, and widely distributed throughout the northern hemisphere. It is generally to be seen at all seasons, but in the winter especially it may be observed, as at that time it approaches nearest to inhabited dwellings, and may be seen among the leafless trees around them, busily searching for its food.

The Cole Titmouse is distributed over Europe, Northern Asia, and North America, as far north as vegetation exists in the form of trees; it is common in Sweden, Russia, France, and Germany, as well as in our own country. With us these birds are indigenous, but like most others of their kind, their numbers are increased in the autumn by migratory flights from the north, impelled by change of season and consequent want of subsistence. These return again in the month of March towards the north. These travellers are only on their progress during the day, skirting woods or thickets, where such are to be met with, and are seldom seen in open or unsheltered spots.

The localities chosen by these birds are chiefly pine and fir forests and woods, both in hilly and in level country; Scotch fir plantations they are especially fond of. They live

in pairs, and are generally seen in the tops of the trees while the weather is mild. During cold and wet weather they come down upon the ground, and visit gardens and orchards, where they may be seen in numbers during autumn and winter.

The habits of the Cole Titmouse much resemble those of the other species, being always in motion in search of food, which consists of seeds, particularly those of the fir-tribe, and insects. They may be seen searching about in all the crevices of the stems and branches, to the tips of which they hang themselves; and the cones are investigated very closely. These birds are also very fond of the seeds contained in service berries. Caterpillars and large insects they trample under their feet, before they begin to feed upon them; the smaller insects they consume entire, as well as the eggs and larvæ. When they obtain a seed from the cone of a fir-tree they carry it to a convenient branch, where they take the kernel out of it while holding the pod with their claws. They are also very skilful on the ground in searching for the seeds of the pine, &c. Where they find plenty of these seeds, they are said to hoard them up, and secrete them behind the bark of trees, or in crevices in the wood, and fetch them out when they are in want; and this is most probably the case, as it accords with their manners when caged, when they have been seen to hide a portion of their food, and frequently to look whether it was still where they put it.

The flight of this species is unsteady, and resembles much that of the other Titmice, fluttering with their wings in the manner of a moth.

The nest of the Cole Titmouse is always placed in a sheltered position; sometimes it occupies a hole in a decayed tree, at a little elevation from the ground; sometimes it is found in a deserted mouse or mole-hole, or in a hole in a

wall or crevice in a rock, usually in the neighbourhood of forests or woods of pine or fir. The materials consist chiefly of short green ground moss, and the nest is lined with the hair of small quadrupeds, sometimes intermixed with feathers. The female deposits in this warm little cavern her six or eight eggs, of the size, shape, and colouring represented in the plate, No. 79. Incubation lasts about a fortnight, and the male and female sit by turns: the young, when hatched, are fed with small green caterpillars. These birds have two broods in the year, the first of which may be seen on the wing about the middle of May.

The usual note of the Cole Titmouse is much like that of the foregoing species, being *zit! zit!* and the call-note is like *zit-tee!*

To close the history of these little birds, let us, finally, point out their great utility in destroying a vast number of insects, hurtful to forest-trees in general, which, if not kept within due limits by these and many other of their fellow agents, would rob the woods of their freshness and verdure.

The entire length of the Cole Titmouse is four and a half inches. The wing, from the carpus to the extremity of the longest quill-feather, is two inches and a quarter in length; the first quill-feather measures nine lines, the second one inch and a half; the third exceeds the second by about three lines, but is scarcely so long as the fourth, fifth, and sixth, which are the longest in the wing. The tail measures one inch eight lines, is slightly forked, and extends four lines beyond the tips of the folded wings. The beak, which is longer and thinner than in the Marsh Titmouse, is in length four lines from the forehead to the tip, and covered at the base with stiff reflected hairs, which conceal the nostrils. The tarsi measure scarcely seven lines, and the feet are rather stout.

The elegant plumage of this little species is as follows:

the bill is dark horn colour, lighter along the edges, and transparent at the tip; the top of the head is entirely covered with a hood of shining bluish-black feathers, which, encroaching a little on the mantle, gives the head an appearance of greater size; the chin is also black; and the characteristic white spot, which distinguishes several of the Titmice, occupies the nape. The cheeks are pure white, bordered below with a narrow black band; the middle of the breast and belly are white; the sides of the breast, the flanks, and under coverts of the tail delicate buff colour. The upper part of the back and scapulars are ash-colour, tinged with hoary green; the lower part of the back and upper coverts of the tail are strongly tinged with brownish buff. The larger and lesser coverts of the wings are dark ash-colour, each feather tipped with a round white spot, forming two bars across the wings; the tail and wings are dusky, edged with the hoary green colour of the back; the tertials tipped with white. The tail-feathers beneath are dusky grey, with white shafts; the under surface of the quill-feathers are the same, with white edges on the inner web; the under coverts of the wings are greyish-white. The tail is slightly forked, and all the feathering is loose, and silky.

Between male and female there is very little difference in plumage: the latter is rather smaller, and the black on the head less glossy, and not extending so far down, and the white is not so pure. The young resemble the adult female. The nest feathers of the young, before the first moult, have a general tinge of green in them; and the soles of their feet are yellow. There is no variation in the plumage of this species at any particular period of the seasons, with the exception of a brighter polish on the new feathers, after the autumnal moult.

The egg of this species is numbered 79 in the plate.

Pl. 80.

PLATE LXXX.

CRESTED TITMOUSE.

Parus cristatus.

The Crested Titmouse, which is distinguished from all the other species of the Parus tribe by the fine erect plumage that ornaments its head, is a scarce and local bird in this country, and confined chiefly to the northern parts of Scotland, where it inhabits the most wooded districts. In the vast forests of pine and fir, that cover so many parts of the north of Europe, this bird is of frequent occurrence: and it appears probable that it entirely confines itself to such localities, as, in our own country, it inhabits fir-covered tracts only. It is a hardy bird, and resides, throughout the year, in several of the northern countries of Europe, as far north as Sweden, where it is a permanent resident. It is an inhabitant of many wooded tracts in Russia, Poland, and parts of Germany, and is found in Switzerland among the mountain forests, and in some of the hilly and wooded parts of France.

In their habits these birds appear less influenced by the successive changes of the seasons than others of their tribe, and are, consequently, more stationary; and their migratory flights, when they do take place, more limited. That partial migrations occur is apparent, by the fact of their being occasionally seen in spring and autumn, beyond their usual forest limits, in plantations and shrubberies. Under such

circumstances, they appear to be hurrying on, as if on their passage to a distant part, passing hastily from bush to bush. In the summer they are found only in forests of large extent, whither they constantly resort to breed. Their haunts are chiefly the very tops of the tallest and oldest fir-trees; besides which they are occasionally seen in juniper trees or bushes, to which they are very partial.

In habits the Crested Titmice resemble others of their tribe, being always in motion from branch to branch, and are lively and quarrelsome, although preferring society. They are seldom seen alone, but associate in flocks, and frequently with other small birds of their kind. When seen among their native forests these birds do not appear shy; but when passing along in their migratory courses they are hurrying and restless.

The Crested Titmouse has not hitherto been ascertained to inhabit any part of England, although it is not uncommon in several of the forests and fir-covered districts of Scotland, from whence specimens are frequently obtained: in that country it has been seen as far south as the neighbourhood of Glasgow, where it is known to breed.

The call-note of this species is the same as that of the other Titmice; to which is usually added the sound *ghirrr!* or *ghirrr-kee!* This call is loudest in the pairing season. When any of these birds are caught, and it is designed to keep them in confinement, they ought to be placed several together in a cage, as they are fond of company.

The food of this bird consists in summer of insects, and their eggs and larvæ, in preference to seeds; but in autumn, winter, and spring, they consume also the seeds of pine trees, and other trees of the fir tribe, which they pick from the cones or take from the ground, where they obtain also many an insect cot that lies concealed among the moss. When caged, mountain ash and juniper berries, as well as hempseed,

may be given to them, and they require much water to drink and to bathe in.

As before mentioned, these birds breed only in large pine forests. The nest is to be found in the hollow part of a decayed tree, or in the deserted nest of a squirrel or magpie: it consists of moss and lichens, and is lined with hair or the wool of animals. The eggs are from eight to ten in number, and in form and colour as represented in the plate, (fig. 80.) They are said to have two broods in the year.

The remarkable crest upon the head, from which this species derives its trivial name, consists of rather narrow, long, and pointed black feathers, edged with white. These feathers are shortest upon the forehead, and lengthen as they approach the crown of the head: the longest are bent forward in the shafts, in consequence of which they can never lie quite flat. The longest, or hindermost of them, measure about an inch in length: the forehead is covered with black and white scale-like feathers. From the beak extends over the eyes a dull or dirty white band towards the nape, which is also of a similar colour. Behind the eye commences a black band, which runs towards the back of the head, and then inclining forward in the shape of a crescent, surrounds the cheeks and ear-coverts. The cheeks and sides of the neck beneath the black crescent are dull white, tinged with yellow. The throat and chest are black, from whence extends a narrow line of the same colour to the nape of the neck, forming a perfect collar. All the upper parts are mouse-colour, palest on the rump: the upper part of the breast is white, tinged with rust-yellow on the sides, which colour deepens on the lower part of the breast, and becomes on the vent, belly, sides, and under tail-coverts, brownish-yellow. The wing-feathers are dark greyish-brown, edged with mouse-colour; the larger quills are edged with pale grey: the tail-feathers are dark brown, edged also with reddish-mouse-

colour, and the outer feathers have narrow white edges. The under surface of the wing and tail-feathers are dark grey, and the inner webs of the wing-feathers are edged with silvery-white; the under wing-coverts are dirty-white, tinged with rust-yellow. The iris is dark brown; the beak black; the legs pale lead-colour; the claws greyish-horn.

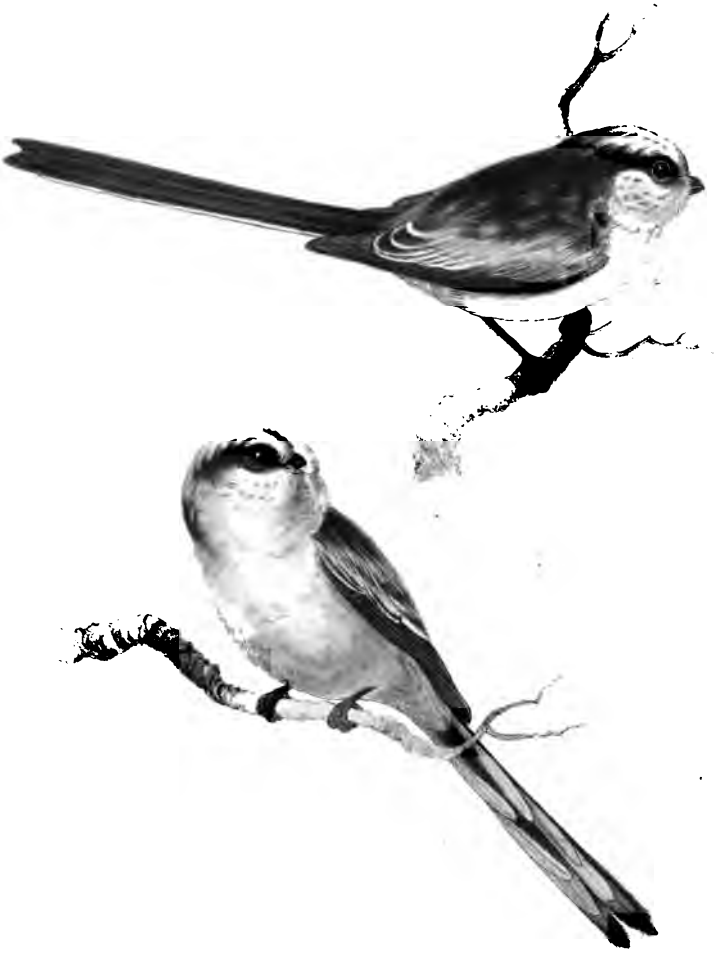
The crest of the female is shorter than that of the male; the black on the chin is not so far extended, and the black border round the neck is much narrower and frequently imperfect.

The young birds, before the first autumnal moult, have the crest small, the black round the cheeks imperfect, and the collar hardly visible. The chin is nearly black, the throat grey; the breast is dirty-white, and all the under parts are intermixed with grey.

The entire length of the Crested Titmouse is four inches and three-quarters. The wing measures, from the carpus to the tip, two inches and a half; and the tail extends about an inch beyond the folded wings; the tarsus measures three-quarters of an inch; and the beak about three and a half lines, from the forehead to the tip. From the forehead to the end of the longest feather of the crest is about an inch and quarter, and the fourth quill-feather is the longest in the wing.

In the autumn of 1839, during a rough gale of wind from the north-west, we observed in a fir-wood near Claremont House in Surrey, a small bird apparently of this species, but being unable to obtain the specimen, we could not ascertain the fact. It is possible that a Crested Titmouse might have been driven so much further south than its usual supposed limit by a strong wind.

The egg of this species is figured 80 in the plate.



Pl. 81.

PLATE LXXXI.

LONG-TAILED TITMOUSE.

Parus caudatus.

The Long-tailed Titmouse is known all over Europe, and in the northern and temperate parts of Asia, in situations of a sylvan character. From the central parts of Europe many of this species depart for milder climes in the autumn, for the purpose of passing the winter, but with us they remain the whole year. During the spring they are seen in pairs, but in autumn and winter these interesting little birds are seen following their vocation in families; the little party consisting usually of about a dozen. Constantly in motion from tree to tree, and flying in a straight line with much rapidity, they remind the spectator of the pictured representation of a flight of arrows. Their movements are noiseless, on account of the soft and silky nature of their plumage; but their presence may always be detected by the musical family cry, *zit! zit!* which is continually reiterated among the little party. From the small size of the body, and its exceeding lightness, and from the length of the tail, these little creatures in windy weather appear hardly able to preserve their balance when on the wing.

Much affection seems to subsist among the members of each little family, and they always roost together. Perched side by side upon a horizontal branch, among thick foliage, their feathers puffed up, their heads behind their wings, and

their long narrow tails drooping, the little party has a singular appearance. During winter they crowd together in a hole in a bank or tree for warmth.

In their everlasting motion while awake, these birds show the family they belong to, but they are not quarrelsome nor cruel, like some of their predecessors. Towards mankind they show little fear, but on the approach of a bird of prey they fly into the thickest part of the nearest bushes with such cries of alarm, that other birds present have notice of the enemy's approach. As before mentioned, these birds prefer wooded districts, and are fond of the vicinity of water.

The notes of the Long-tailed Titmouse, besides the usual call, are *tea! tea!* and *tsee-ree-ree!* Their food consists chiefly of insects, and their eggs and larvæ.

The nest of this species is one of the most beautiful among the structures of birds, and deserves the greatest admiration for its lightness and delicacy. So many and various are the situations chosen by the little architects, that it is difficult to say where these beautiful nests are most commonly to be met with. They are found in thorn-hedges and bushes, fruit-trees, willow shrubs, furze bushes, &c. The nest is of a long oval form, with the entrance on one side towards the top: the materials chosen are green moss, matted together with spider-cots, vegetable wool, and fragments of the bark of birch-trees. The outside materials, consisting chiefly of tree-moss, are usually taken from the bush or tree in which the nest is placed, which assimilates it with the stems, and sometimes serves to preserve it from detection until the little ones are flown. The entrance of the nest is scarcely large enough to admit a person's finger, and is nearly closed by the elasticity of the constructing materials. When complete, such a fabric cannot be looked upon without the utmost admiration and wonder, when we observe the minute fragments of which the nest is chiefly

composed, its elasticity, and the great tenacity with which these small parts are held together. The last-mentioned quality appears due to the webs of spiders, and to the silky cots of chrysalides, of which great part is composed.

These substances must also be a great protection to the interior of the nest against rain, which apparently cannot penetrate through them; and such a defence must be the more necessary to this species, as many of their nests are built early in the spring, while the trees and hedges are still leafless, and are often placed in situations exposed to the weather.

The Long-tailed Titmouse begins to construct its nest early in March, and it is said to be usually three weeks in progress. We once found one complete as early as the 22nd of that month, and being desirous to observe the habits of the little occupants, visited it several times; but, being placed in a leafless hedge, we anticipated the fate that soon befel it,—it was pulled out by some merciless boys, and the fragments scattered about the lane. On our next visit we found the two little birds flying distractedly about, and hurrying to and fro near the fatal spot. This was continued for several days, and at last they were observed in another part of the same lane, about a hundred yards distant, employed in constructing a second nest from the scattered materials of the former. After about a fortnight, the second nest was also ruthlessly destroyed, and the poor little birds abandoned the spot. The nests of this species are usually found at the elevation of from two to five feet from the ground; but we remember to have seen one in a tall tree, at about the height of five-and-twenty feet, probably in the process of building, as the birds were going frequently in and out.

In the Long-tailed Titmouse the beak is very short, measuring less than a quarter of an inch, and, in consequence of the bristling feathers which grow about its base, a very small part of

it is visible. The upper mandible projects a little beyond the lower, and is more arched than in others of the Titmouse family. The eyelid in this species is bare of feathers, and the upper lid is always thicker than the lower, particularly during the time of incubation.

The plumage of the adult male is as follows. The eyelid is lemon-yellow: the beak is black, and polished like ivory. The bristling feathers which surround, and partly cover the beak, are white with brownish tips. The top of the crown and nape, the throat, chest, and all the under parts are white, but dull, as if dusty, intermixed on the flanks, thighs, and vent with tile-red: the under tail-coverts are dingy, dull tile-red. Beneath the white crown, or crest, there extends along the side of the head a broad black band, which surrounds the eyes and passes backwards to the nape, where it unites with the black feathering of the middle of the back: the lower part of the back is black, intermixed with streaks of pale tile-red; and the short upper tail-coverts are black. The rest of the back and shoulders are white, intermixed with dull tile-red. The wing-coverts are brownish-black, those nearest to the body broadly tipped with white; the tertials are dusky, bordered with white. The secondary quills are almost black, with white edges, and the primary quill-feathers are dusky. The six middle feathers of the tail are black; the three outer ones on each side have the outer web white, and a white, wedge-shaped spot on the inner web, towards the tip. The feathers of the tail are graduated in length, the outer pair being little more than an inch in length, while the six central ones measure three. The under coverts of the wings are white, the under surface of the quills grey, with silvery edges. The legs and feet are black; the soles of the feet frequently grey: the iris is dark brown.

The female nearly resembles the male in plumage. The young, before the first moult, differ in some respects from the

adult birds; their eyelids are bright blood-red, the black about their head and upper parts is of a smoke colour, and all the other colours paler.

The entire length of the Long-tailed Titmouse is five inches and a half. The wing, from the carpus to the tip, is two and a half inches, and the tail, which is fully three inches long, extends two inches and a quarter beyond the closed wings; the tarsi measure nine lines. The feathering of this bird is so silky and loose that the head and body are mingled into one shapeless ball.

In this species the number of eggs varies from nine to twelve, and there are sometimes found as many as fifteen in one nest. They are in size and appearance as represented in figure 81, in the plate, being dull chalky-white, minutely speckled about the zone with rust-colour; some are found entirely plain.

This little species is distinguished in different counties by various local names, in allusion to its peculiar manner of constructing its nest. In Surrey it is called the "Long-pod," in Suffolk the "Pudding-poke," and, in some counties, the "Bottle-tit," all sufficiently descriptive of its habits.

79

80.

81.

Pl. 82.

PLATE LXXXII.

BEARDED TITMOUSE.

PARUS BIARMICUS. (*Linn.*)

AMONG the smaller British birds there is none more lovely than the Bearded Titmouse. Its elegant form, silky plumage, and well-defined markings, combine to render it, when in a living state, one of the most pleasing of the feathered race. The intensely black moustaches of the male bird add greatly to its beauty, although they appear an extraordinary appendage to a bird so gentle and mild in character, inducing the belief that moustaches are by no means certain indications of ferocity or courage. The nature of the Bearded Titmouse is amiable, and it is pleasing and elegant in all its movements. These birds are restless, like their congeners, the rest of the Titmouse family, continually running up and down the stems of the rushes, and rocking themselves frequently at the extreme points, influenced by the wind or by their own slight weight. They associate in pairs or families, and occasionally unite in small flocks. They display great agility in climbing the rushes, among which they live, but are seldom seen upon the ground. Their flight is buoyant, and their note, which is often uttered on the wing, is clear and ringing.

The Bearded Titmouse is, in this country, a bird of very local distribution, on account of its exclusive attachment to

situations of a peculiar character. It is found only in wet and marshy localities, abounding in reeds, and affording a plentiful supply of its peculiar food, namely, small mollusca. These localities are chiefly the banks of fresh-water rivers; but they also abound in some situations where salt water flows in at every tide, namely, at Erith on the Thames, &c.; and Montagu mentions having killed a specimen near Winchelsea in Sussex, among the reeds that grow close to the sea-shore. By this naturalist the earliest correct accounts of its habits in this country were given; to which we shall again refer. The localities, mentioned by many different authors, are reedy tracts near Cowbit in Lancashire, and similar situations in Gloucestershire; several of the fresh-water broads in Norfolk; large tracts of reeds along the Suffolk coast; the skirts of Whittlesea near Huntingdonshire, and the fenny districts of Lincolnshire; it is also found near Godalming in Surrey, and is said to inhabit the banks of the Thames from London as far as Oxford. In this latter quarter, as well as elsewhere, this species appears very locally distributed, as we know parts of the Thames, many miles in length, where it does not occur.

The Bearded Titmouse apparently inhabits the same situations summer and winter; and, notwithstanding its delicate appearance, seems to brave the cold of the chilly and dreary spots it frequents with impunity; concealing itself, however, as well as circumstances will permit. In the Magazine of Natural History some particulars are recorded, which, as they embrace many points of the habits of these little birds, we copy without farther apology. "I was told," says a correspondent of that work, "that some of these birds had been seen in a large piece of reeds below Barking Creek; and being desirous of observing them in their haunts, I went, accompanied by a person and a dog, to the above named place, on a cold and windy morning; the reed-cutters hav-

ing commenced their operations, I was fearful of deferring my visit, lest my game might be driven away. Arrived on our ground, we traversed it some time without success, and were about to leave it, when our attention was roused by the alarm cry of the bird. Looking up, we saw eight or ten of these beautiful creatures on the wing, just topping the reeds over our heads, uttering, in full chorus, their forcibly musical note, which resembles the monosyllable *ping!* pronounced at first slow and single, then two or three times in a more hurried manner, uttered in a clear and ringing, though soft tone, which well corresponds with the beauty and delicacy of the bird. Their flights were short and low, only sufficient to clear the reeds, on the seedy tops of which they alight to feed, hanging, like most of their tribe, with the head and back downwards. After some time, we were fortunate enough to shoot one, a male, in fine plumage. I held it in my hand when scarcely dead. Nothing could exceed the beauty of the eye; the bright orange of the iris, surrounded by the deep glossy black of the moustaches and streak above, receives additional brilliancy from the contrast, and struck me as a masterpiece of colour and neatness."

The principal food of the Bearded Titmouse consists, as we are informed by another correspondent of the Magazine of Natural History, of small shell snails, the *Succinea amphibia*, &c., with which their crops have been found filled. These appear to pass into the stomach in a perfect state, where they undergo the process of decomposition, which is accomplished by the muscular action of the stomach, aided by the trituration of numerous angular portions of quartz, by which the minute division of the shells is effected. In addition to this, we are informed by Mr. Yarrell, that "the sides of the stomach are muscular, and much thickened, forming a gizzard, which the true Titmice do not possess." They are supposed also to feed upon many other insects that abound in the aquatic

localities frequented by this species, as well as upon the seeds of the reed and other water-plants.

The nest of the Bearded Titmouse resembles very much those of the reed and sedge warbler, and the situation chosen often accords with that of the latter bird, a circumstance which probably causes it to be frequently overlooked, unless when distinguished by the eggs. They are usually found in the thickest part of the reeds, and are said by some authors to be suspended between their stems, at the elevation of several feet from the ground; while others, perhaps with more probability, describe them as sustained very little above the surface of the ground by means of the stalks of grass and broken reeds, among which they are fastened. In form the nest is cup-shaped and rather deep, composed of coarse grasses, and withered leaves of reeds, thickly and warmly lined with the flowering tops of the latter, intermixed with willow down. The eggs are also variously described. All authors agree in the ground colour being white, but in the colour and form of the markings, their several descriptions differ widely. Mr. Yarrell speaks of them as "sparingly marked with pale red lines and scratches." Mr. Hoy says, they are "sprinkled all over with small purplish-red spots, intermixed with a few small faint lines and markings of the same colour." While Temmínck says, they are reddish, with brown spots, which are most numerous on the larger end. We can ourselves add another variety to the list, having received, some years since, for the use of our quarto work, a specimen, from an ornithological friend in Suffolk, which was pure white, marked sparingly with fine black hair-like streaks, as represented in the accompanying plate.

The task of nidification commences in April; and the young birds are on the wing in the following month. One, which was procured by Montagu, in June, had its nestling feathers much the colour of those of the female, although of a looser texture, as in all young birds.

The geographical distribution of this bird appears far less extended than that of others of the *Paridæ*. It appears confined to the temperate parts of Europe; and Holland, where, from the nature of the country, it is abundant, is, possibly, its northern limit. Southward of that country it is found in some parts of France and Italy. In England it has not been observed further north than Lancashire, nor does it appear to be generally known further towards the west than Gloucestershire.

In several points of structure and habits this species differs from the other members of the *Parus* family; namely, in the muscular character of the stomach before mentioned, in its food, and in its aquatic habits. These differences have caused it to be removed, by some systematic authors, from among the *Parus* family, and distinguished by the generic title of *Calamophilus*.

The entire length of this species rather exceeds six inches. The wing, from the carpus to the tip, measures two inches four lines; the second, third, fourth, and fifth feathers are nearly equal in length. The tail extends about two inches and a quarter beyond the tips of the folded wings; its feathers are graduated; the central pair measure above three inches, the succeeding pairs shorten by about three lines each, and the outer pair is, therefore, an inch and a half shorter than the central one; these feathers are all rather broad and pointed, and very delicate in texture. The beak measures about four lines, the tarsi three quarters of an inch.

The plumage of the adult male is as follows: the forehead, top of the head, and sides of the neck, are delicate ash-colour; the chin, throat, and upper part of the breast, pure white: a moustache of intense black occupies the space between the bill and the eye, and descends down each side of the face. The back and scapulars are fawn-colour; the upper tail-coverts, flanks, and thighs the same: the four

longest feathers of the tail are also fawn-colour; the rest rufous-brown, shading into white towards the tips. The quill-feathers are dusky, edged with white; the tertials black, deeply bordered with rust; the coverts of the wing the same. The lower part of the breast is tinged with peach blossom, the middle of the belly white, the vent black: the beak and eyes are orange, the legs and feet black. In the female the moustache is white, the head and sides of the neck hair-brown; the rest of the upper plumage brownish-fawn; the head and middle of the back streaked with dusky along the shafts of the feathers. The tail is not so long as in the male, but the rest of the colouring is nearly similar.

The egg of the Bearded Titmouse is figured 82 in the plate.

Pl. 83.

INSESSORES.
DENTIROSTRES. *SYLVIADÆ.*

PLATE LXXXIII.

ALPINE ACCENTOR.

ACCENTOR ALPINUS. (*Bechstein.*)

THE ALPINE ACCENTOR, as its name implies, inhabits chiefly mountainous countries, especially the Alps of Switzerland. It is found in some of the most elevated parts of France and Italy; and it is to be presumed that it also may be an inhabitant of many of the mountainous regions of Asia, as it is known to be a resident in some of the hilly chains of Japan. Upon the Alps these birds are observed at all seasons of the year, and chiefly choose the region where the snow begins to give place to vegetation. In summer they ascend the loftiest of the Swiss mountains, and are constantly seen on the St. Bernard, in the vicinity of the Hospital, at an elevation of about six thousand feet above the level of the sea. In winter they descend into the valleys, and in severe weather occasionally frequent farmyards and villages. In manners, the Alpine Accentor is a staid and quiet bird, and appears not very observant, as it betrays but little consciousness of the presence of man. In their native regions these birds may be observed associating in small parties; when approached, they only fly to a little distance, and settle again, or hop away among the stones upon the ground, in the same manner as the hedge Accentor conceals itself in our gardens. They are seldom seen to perch or rest upon trees, but are usually observed to alight upon rocks, or among piles of stones.

The call-note of these birds is said to be a close imitation of the word *tree! tree!* but the song of the male is considered very pleasing, and resembles that of the sky-lark and pipit.

The food of the Alpine Accentor consists of seeds and berries, and small snails, which they take from the ground among the stones; also beetles, ear-wigs, flies, ants' eggs, &c. &c. All sorts of grass-seeds also constitute their food during great part of the year.

The nests of these birds are usually found among rocks or stones, or under low bushes of Alpine roses, &c., close to the ground, and covered over by the bushes, or sheltered by shelving stones, which protect them from rude winds or unfavourable weather. The nest consists of moss and fine grasses, and is lined with wool and hair; it is cup-shaped, and resembles in form and structure that of our common species, the hedge chanter; the eggs also have a great resemblance to that nearly allied species, being fine blue-green, without any spots; they are four or five, and probably even more in number. These birds are said to have two broods in the year; the first of which is hatched in May, the second in July.

As the habits of the Alpine Accentor confine it, in a great measure, to mountainous regions, it must necessarily be locally and partially distributed, and as it is little known on the western borders of Europe, it is a subject of some surprise how it should happen that individuals have occasionally penetrated so far from their natural haunts as to visit our island; especially as these birds in their migratory movements do not appear to seek change of latitude, but only to consult the variations of temperature that result from a greater or less elevation above the level of the sea. Three instances only are recorded of the appearance of this bird in England; one of these was shot some years ago in

the neighbourhood of Epping Forest, another at Cambridge, and a third in the garden of the Deanery of Wells.

Although the Alpine Accentor is considered a rare and accidental visitor with us, yet some may possibly pass unnoticed: should a specimen come under the observation of an inexperienced observer, it may be detected by these general characteristics:—In form, this bird is short and rather stout; its wings are large, and the breadth of the tail, which is very conspicuous, would alone enable an ornithologist to detect it. All the feathers of the tail have a white, or buff-coloured spot upon their tips: in adult birds the throat is white, with black crescent-shaped spots: young birds have the throat ash-colour, without spots. Its habits, as before mentioned, are terrestrial, and when on the ground it frequently moves its tail and wings in the manner of the redbreast. This species is the largest of its family.

The distinguishing characters of the genus *Accentor* of Bechstein, are:—bill strong, straight and sharp pointed, the upper mandible emarginated; nostrils naked and basal, pierced in a large membrane: first quill-feather of the wing very short, the second and third nearly equal.

The measurements of this bird are as follows. Its length is from six and a half to seven inches from the tip of the beak to the extremity of the tail. The tail is slightly forked, and the upper tail-coverts, which are very long, reach to within an inch of its extremity. The beak is seven lines in length, and much compressed towards the tip, which is black, while at the base both mandibles are yellow: the gape and tongue are also yellow; the iris is yellowish brown in adult birds, and cinereous brown in young specimens. The claws are of moderate length, and rather stout and large, particularly the hinder, which are much arched, compressed towards the tip and very sharp. The front of the tarsus is scaled; the legs are dingy reddish yellow, the soles and joints of the feet and

toes brownish; the young birds have flesh-coloured feet, with claws of nearly the same hue. The tarsus measures nearly an inch in length, the middle toe and claw nine lines, and the hinder about seven lines, of which one half is the claw.

The plumage of the Alpine Accentor is exceedingly close and soft, and its varied colours are as follows. The adult male has the head, nape, and sides of the neck, cheeks, and forehead, brownish ash-colour, the latter tinged with yellowish brown; the back and shoulder feathers are dark brown in their centre, and along their shafts to their tips; broadly edged with cinereous ash, which gives place to pale rust-colour on the scapulars. In some specimens the rump is reddish ash-colour with dark shaft streaks; in others plain grey. The throat and chest are very prettily marked, the ground-colour being white, bordered below with a black band, and speckled over with crescent-shaped dusky spots: the remainder of the chest and breast are soft reddish ash-colour; the sides of the breast and flanks fine rush-colour, with loose whitish edges to the feathers. The rest of the under parts are white, tinged with yellowish brown, and spotted with darker brown: the under tail-coverts are dusky, broadly tipped with white: the lesser wing-coverts are yellowish grey; the lower row bordering upon the greater coverts dusky towards the end, with pure white tips; the larger wing-coverts dusky with yellowish ash-coloured edges, and three cornered white spots on the tips;—by these feathers two white bands are formed across the wings. The tertials are dusky, bordered with rust, and have faded edges: the secondary quill-feathers are duller in colour, with narrower edges. The primaries are dark brown, edged with rust yellow: the tail-feathers are dusky ash, palest towards the root, all broader at the base than at the tip; the feathers individually edged with yellowish grey, and with a rust-coloured spot at the tip. The under part of the tail is dark ash-colour with white tips. This is their appearance in autumn.

In the spring plumage there is some difference in the colours, owing to the wearing away of the edges of the feathers. The spots on the tip of the tail-feathers are white instead of rufous; the feathers of the under parts have lost their white edges, and therefore appear redder; the crescent-shaped spots on the throat and breast are no longer perfect: the upper parts are of a cleaner ash-colour; the oblong dark spots on the back are become more visible; the white bars on the wings are much narrower, and partly lost.

The female differs little from the male, but she is rather smaller in size, and her plumage is less bright, less rufous, more spotted on the under parts, and more grey on the flanks: the spots on the breast are smaller and paler, and the under mandible less yellow.

In young birds the back is frequently much tinged with brown; the beak is horn-colour, with dingy yellow at the base: the white edges of the rust-coloured feathers on the sides of the breast are so broad, that they nearly cover the principal colouring.

The young birds before the first moult are very different from the parents, their whole upper parts being ash-colour, with dusky spots; the throat and breast have no spots, but are plain greyish white.

The egg of this bird measures eleven lines in length, and is rather pointed at the smaller end: in colour it is plain greenish blue, as represented in the plate, fig. 83.

PLATE LXXXIV.

HEDGE ACCENTOR.

Accentor modularis.

The Hedge Accentor, commonly called the Hedge-Sparrow, is a very elegantly shaped bird, but on account of its simple plumage, is not generally noticed by the common observer; it is therefore necessary to speak a word in its favour, to point out its merits and beauty, in order that it may not be overlooked. The habits also of this bird tend to conceal it, although it is one of the most common and constant inhabitants of our gardens, and one of the few that enliven and cheer us with a winter song. Its character is mild and confiding, and in manners it is sociable, meek, and pleasing, but somewhat timid. In the tones of its voice we consider that this pretty chanter rivals, if it does not surpass its associate, the redbreast, its notes being more round and full, and uttered in a lower key; but it is not so well known as a singer, for while the robin places himself boldly on a conspicuous branch, and exhibits his orange breast and dilated throat, as if to challenge our admiration, the quiet Hedge Accentor, hidden among the foliage, sings his sweet but short lay unobserved and unknown.

The Hedge Accentor is to be met with in Britain at all seasons of the year, and in most localities not entirely destitute of trees and hedges. During the summer months this species visits Norway and Sweden; and is found generally

Pl. 84 .

throughout the temperate parts of Europe, retiring to the southern parts in winter. These birds are seldom seen but in pairs; their chief haunts are low bushes, hedges, and underwood, orchards, plantations, kitchen gardens, &c. They keep themselves generally near the ground, and remain in the vicinity of their birthplace.

The song of this species continues the whole year, with very little interval; in the breeding-season it is amplified by some additions, and in the depth of winter it is not discontinued; but on a sunny day, from the covert of a low bush, its cheerful and pretty song may frequently be heard.

In November, as soon as the leaves are fallen, Hedge Sparrows begin to be seen upon the ground in numbers, hopping about the borders in flower-gardens, in busy and unremitting search for their minute food, twitching about, and turning over the scattered leaves. So quiet are they in the search, and so close do they keep themselves to the ground, to whose tints their plumage bears much resemblance, that the eye is often at fault to detect them.

When caged, the Hedge Accentor still shows a decided partiality towards terrestrial habits, very commonly roosting upon the floor of its cage. When it sleeps its legs are much bent, and its body held in a horizontal position; when awake also, its attitude is singularly different from that of most other small birds, and its manners remarkably quiet and retiring. The male and female, when caged together, show great attachment, constantly sitting and roosting side by side, and in winter pressing closely to one another. They also become much attached to companions, even of a different species. We possessed one, a fine male bird, and an excellent singer, which was so much attached to its only companion, a male redbreast, that on the latter escaping by accident from the cage, the Hedge Sparrow became dull, neglected its food, and sat with ruffled feathers, and appeared

so drooping and sad, that we thought it necessary to give the poor solitary its liberty, in order to save its life. To their human friends these birds also appear grateful and attached; we kept a pair one winter in a garden-cage, and not desiring to prolong their imprisonment, we let them out early in the spring, as soon as we thought they would be able comfortably to obtain their subsistence. They were no sooner free than, instead of forsaking us, they commenced building themselves a nest in a leafless hedge, about two yards from their former prison.

The food of this species consists of insects and seeds: in the spring of the year and summer, they feed principally on the former, such as small beetles, caterpillars, flies, and the larvæ of many insects; but in autumn and winter they subsist much on seeds, which they pick up from the ground, but never gather from the trees or plants on which they are produced, which circumstance speaks greatly in favour of the harmlessness of this little creature, as well as of its utility in clearing the ground from thousands of superfluous seeds. The young birds are invariably fed with insects.

In confinement the Hedge Accentor feeds on rape and hemp-seed, crumbs of bread, chopped meat, and almost everything eatable. These birds are easily tamed, and will live some years, seemingly contented and happy.

The Hedge Sparrow is a very early breeder; we have reason to believe it to be the earliest of any of our native birds. Among our memoranda we have a notice of having seen a nest of this species on the 21st of January; and as late as the 22nd of July we have found one with fresh-laid eggs in it. The nest of this species is usually placed in a thick thorn hedge, or bramble, at an elevation of from one to four feet from the ground. It is usually composed of green ground-moss, intermixed with roots and dry stalks, to which the moss is attached, and lined with tufts of cow's hair,

or knots of wool, and occasionally a few long horse-hairs; the nest, when complete, has an unfinished appearance, especially on the outside, which is very ragged; within, however, it is thickly and warmly lined, the cow's hair forming an excellent mattress. We have generally observed that the materials employed in a Hedge Sparrow's nest are of a dark colour, especially the inner lining; can this be in order to harmonize the better with the black and dingy colouring of the young nestlings when first hatched? It is remarkable that the cuckoo, which lays a pale, mottled, greyish-brown egg, should so often deposit it in the nest of this species, whose eggs are of so different a character: instinct may teach the parent cuckoo that her young, when hatched, exhibits a red gaping mouth, similar to those of the young Hedge Sparrows, therefore her choice may be a necessary precaution in the deceit practised upon the duped foster parents. The nest of this species is in form deep and well rounded, and the eggs, from five to seven in number, are in shape and colour as represented in our Plate.

In form the Hedge Accentor is slender and delicate, the tail long and narrow, and the beak thin and compressed towards the tip. The colours of the adult male bird are as follows: the head, neck, and breast are pale slate-colour; the cheeks are tinged with dusky, and the feathers have white shaft streaks; the top of the head, and nape of the neck are tinged with brown. The upper part of the back and the shoulder feathers are light reddish-brown, with dusky spots in the centre of each feather, giving a tessellated appearance; the rump and upper coverts yellowish-brown. The throat is of a paler grey than the head, and the middle of the belly dingy white; the flanks are yellowish-grey, with long brown streaks, darkest about the thighs; the under tail-coverts are yellowish-white, with a dusky lancet-shaped streak. The wings resemble in colour the back, the feathers being

dusky, edged with reddish-brown; the larger wing-coverts are tipped with white, which forms a band across the wings. The tail-feathers are dark greyish-brown, with paler edges; the under wing and tail-feathers are brownish-grey, the under coverts slate-colour.

The male and female differ very little in plumage; but the latter is always rather less in size, the colour of the head paler, and the back tinged with grey. In adult birds of both sexes the iris is brownish-red; the beak dusky, the corners of the mouth dirty yellow; the gape and tongue yellow; the tarsi thin and delicate, the claws sharp, and dusky in colour; the legs and feet are reddish-brown. The moult takes place in July or August.

The young, before their autumnal moult, are very different from the adult birds; over the eye is a pale yellowish-grey streak; the top of the head is deep yellowish-grey, the back of the neck dingy brownish-yellow, spotted with black; the entire back and shoulders yellowish-brown, with black oval spots; the rump yellowish-grey; the throat is dirty yellowish-white; the cheeks dull rust-yellow, mixed with grey; the upper part of the breast and flanks are dark rust-yellow, with black oval spots; the middle of the breast and belly dirty white; each feather greyish-yellow towards the shafts. The under tail-coverts are rust yellow, with blackish shaft-streaks; the wings and tail are as in the adult, except that the tips of the greater coverts are rust yellow instead of white, and the lesser coverts are also tipped with the same. The iris is at first dusky, and afterwards brownish-red; the beak is ash-brown on the upper mandible, yellowish below, the throat and tongue orange, the corners of the mouth red.

The length of the Hedge Accentor is about five inches and three-quarters. The beak measures about five lines, and tapers from the base to the tip; the wing measures, from the

82 .

83 .

84 .

carpus to the tip two inches nine lines, and the third, fourth, and fifth quill-feathers are nearly equal in length. The hind claw in this species, as well as in the preceding, is large and arched.

The egg of the Hedge Accentor is figured 84 in the Plate.

PLATE LXXXV.

PIED WAGTAIL.

MOTACILLA LOTOR. (*Rennie.*)

Of this elegant and pleasing group, four species only were, until lately, considered as British; three of these are common and well known, and the fourth so scarce as only to be looked upon as a straggler, or visitor of rare occurrence. Recently a fifth species has been added to the list, of which we shall speak hereafter.

The species, at present under consideration, is the most common and generally diffused of all, and everywhere to be found in localities of an open character, where meadow land prevails, or where wide heaths and open moors extend, especially in the vicinity of water; they principally delight in spots where the shortness of the herbage enables them to run with facility. The pleasure these birds take in close kept herbage may be observed whenever a lawn is freshly mown; immediately these pretty creatures are seen skimming over the hedge, or boundary, and alighting upon its level surface, where they run along, with steps so rapid that the eye cannot follow their quick succession; pecking at intervals with lively gaiety, and constantly moving their long and slender tails; if disturbed, they spring up with a shrill and delicate cry, and bounding along to a little distance, with an undulating motion, presently alight again. They are also very fond of the pebbly banks of rivers, along which they seek their

Pl. 35

food; and they may frequently be seen in summer bathing and washing themselves upon a shallow shore.

This bird, although constantly resident in Britain, and not generally considered of a migratory disposition, evidently changes its station at different times, and after a periodical absence returns again. It may be observed in gardens, and grass fields, in summer and in the early part of autumn, in considerable numbers, probably several families together; while, in the same places, in winter, few or none are to be seen, notwithstanding the usual enticement of fresh-mown lawns.

This species, as far as the subject has at present been investigated, appears restricted to a limited range, including chiefly Norway, Sweden, and the British Isles; and it is occasionally seen in the north of France. In the two first mentioned countries it is, doubtless, only a summer visitor; as it does not even brave the cold of the northern counties of England, in the winter season, but retreats from those parts in autumn towards the south.

We have ourselves long suspected that the migrations of the Pied Wagtail were more decided and extensive than the commonly received opinion warrants; and our suspicions have been most agreeably confirmed, by an account that appeared in the fifth No. of "The Zoologist" for May last.

We hope we may consider ourselves at liberty to transcribe a considerable part of the communication, which, we believe has not yet been noticed in any work, professedly upon British Birds. It is from the pen of A. E. Knox, Esq.

"The Pied Wagtail arrives from the Continent, on the shores of Sussex, about the middle of March. Although several remain with us during the winter, these bear but a small proportion to the number that visit us in the spring. On fine days during this month, with a gentle breeze from the south, I have frequently seen them, on different parts of the

coast, flying directly from the south, and from such a distance at sea as, at first, to be scarcely perceptible; gradually, however, becoming more distinct, until they alighted near me on the open shore, sometimes singly, and at other times in small parties.

"The fields, in the neighbourhood of the coast, where but a short time before scarcely an individual was to be found, are soon tenanted by numbers of this species; and for several days they continue dropping on the shores in detached parties. The old male birds arrive first, presenting the beautiful jet black and pure white plumage of the breeding season; while the females, and the males of the preceding year, which resemble the females, the plumage on the back being of an iron grey, do not make their appearance until a few days afterwards. It may be observed that the white on the forehead and cheeks of these newly arrived birds is much more pure at this time than in those which winter in England, and altogether they have a fresher, and, as it were, a cleaner appearance than they themselves present, a short time after their arrival in this country.

"Some of the old males appear to have paired before their departure from the Continent; for after alighting on the shore, they exhibit many signs of restlessness and anxiety; performing short flights, and incessantly calling for their mates.

"It is worthy of remark that those Pied Wagtails which remain with us during the winter, do not assume the summer garb at so early a period as their travelled brethren; indeed, on the arrival of the latter, who invariably make their appearance in the full breeding plumage, the former have but partially commenced the change, a few black patches beginning to appear on the throat, and the light grey of the back being varied with occasional feathers of a darker hue. In about a fortnight afterwards this assumption of the breeding plumage

is complete; and at the expiration of that time, the Pied Wagtails which have arrived from the Continent, and those which have remained in England during the winter, present the same appearance.

"After remaining in the neighbourhood of the coast for a few days, these birds proceed inland in a northern direction; and any practical observer of birds, in the interior of the country, may perceive how much more numerous they suddenly become at this period. There is scarcely a pool, road-side ditch, or village horse-pond, where they may not be seen in pairs; and in districts where, but a week before, the species was but thinly distributed.

"These birds pair early and moult soon, having completed the change at the end of July, or early in August. The black feathers gradually disappear from the throat in both sexes, and the dorsal plumage becomes of a lighter colour in each; the back of the male assuming the grey of the female, during the breeding season; while that of the female, and the young of the year in both sexes, changes to a very light grey. Indeed, between the two latter there is no external difference of appearance.

"About the middle of August the Pied Wagtails commence their return towards the sea-coast, and now first appear to be gregarious in their habits. At this season I have noticed them in considerable numbers on village commons, and similar localities in the interior of the country, where they remain but a few days, and then proceed to the south.

"At the latter end of the month, or the beginning of September, they may be seen near the sea, in flocks of from thirty to forty, flying invariably from west to east, parallel with the shore, and following each other in constant succession. These flights continue from daylight until about ten o'clock in the forenoon; and it is a remarkable fact, that so steadily do they pursue this course, and so pertinacious are

they in adhering to it, that even a shot, fired at an advancing party, and the death of more than one individual, cannot induce the remainder to fly in a different direction; for after opening to the right and left, their ranks again close, and the progress towards the east is resumed as before.

"I have observed that their proximity to the shore, during this transit from west to east, seems to depend, in some degree, upon the character and extent of the country intervening between the downs and the sea. For instance, in the more western parts of the country, between Chichester and Worthing, where a flat, maritime district, of considerable extent and in a high state of cultivation, lies between the hills and the sea, the flocks appear to be less numerous, or rather more scattered, and occur at greater distances from the coast than in the neighbourhood of Brighton, where the downs approach close to the shore, and where the flocks appear to become more concentrated.

"I am acquainted with a good practical observer, who informs me that, in the neighbourhood of Brighton, he has seen upwards of a thousand pass in a single morning. The same person has witnessed, as well as myself, the arrival of these birds from the Continent, in March, on the open coast near Hove, between Brighton and Shoreham.

It is certain that these birds never retrace their course in a westerly direction; and that, from this period, throughout the entire country the species continues to be comparatively but sparingly distributed, until augmented by fresh arrivals from the Continent, in the warm days of the ensuing spring."

The fact of the migration of this species appears to have been recognised formerly, (since Bewick mentions that it is believed to migrate towards southern climates in October) and to have been since lost sight of. Even Montagu, although he states that in winter, in severe weather, they congregate in marshes, subject to the flow of the tide, where they may be

seen on the southern coast, when none are to be observed inland, does not seem to have had any suspicion that they went still farther.

Notwithstanding the migration in autumn of this species in numbers, as above described, many yet remain behind. At the present season, the middle of December, we have observed flocks of eight or ten fly towards the south-west, just before dark in the evening, not one flock alone, but so many that the aggregate must amount to several hundred individuals. These all fly at an elevation just above gun shot; and although being desirous of obtaining specimens, we walked some miles along the bank of the Thames for that purpose, not one specimen was to be met with, either on the ground or within the range of a gun. Whether these are now on their way to join their migrating brethren, and have stayed to this late period, in consequence of the unusual mildness of the season, or intend to pass the winter in these latitudes, future observation must decide.

Towards the end of February, Pied Wagtails may be seen flying in pairs, having by that time chosen their mates for the summer. Some differences of opinion seem to prevail with regard to the plumage of the two sexes of this species at different seasons, some authors describing the female to have her back dark slate-grey, or grey mottled with black, and attributing to the *Motacilla alba* of Linneus alone, the pure grey-back. Our opinion on the subject rather differs from this, and an observation recorded some time ago in our own note-book, will, we believe, be found frequently correct. "Feb. 25, saw two Pied Wagtails flying together in pursuit from tree to tree, evidently a pair: one had the head and back perfectly black, of an uniform colour; the head and nape only of the other were black, the back clear, pale ash-grey. These birds, it may fairly be presumed, were about the same age: why then does the back of the one become darker, and that of the other lighter in the spring season?

The Pied Wagtail produces its first brood early, and consequently a second or late brood is frequently found.

The courting scenes in which the male endeavours to advance his suit with his chosen mate, are exceedingly amusing. The male stands before the object of his affection with actions expressive of the deepest humility and reverence, alternately raising his head, and then bowing until his little beak touches the ground; from time to time, spreading his tail like a fan, and drooping his wings; these actions we have seen continued uninterruptedly for the space of a quarter of an hour. Meanwhile, the object of these tender attentions stands at the distance of about half a yard, apparently listening with maiden coyness and looks half averted, an attentive and admiring spectator.

The nest of this species is sometimes placed upon the ground beside a tuft of grass, or beneath the shelter of low herbage, sometimes in a hole in a pollard tree, or a crevice in an old wall. It is in all cases well bedded in the surface in which it is placed. We have found it in the middle of a turnip field, hidden among the spreading leaves. Advantage is taken in most cases of a convenient depression in the surface of the ground, in which the nest is constructed as in a cup, the inner part only being visible, and the upper edge of the nest on a level with the earth. We have also taken the nest and eggs of this species from the crown of a pollard willow by the side of the Thames, at an elevation of about eight feet from the ground. The nest was placed in a cavernous recess among the stumps. It was chiefly composed of dry skeleton leaves intermixed with the more usual materials.

The parent bird is extremely solicitous for her young or eggs, and will suffer herself almost to be taken off the nest before she makes any effort to leave them. When compelled to leave her nest, she retreats to but little distance,

and alighting upon a railing or clod of earth, watches it with jealous attention; and presently, when the danger is past, with one or two efforts of her springing flight she is returned again.

The nest of this species is a very thick, close, and elastic structure, composed of a great quantity of fibrous roots and stalks of grasses, intermixed with tufts of vegetable down, and the hair or fur of animals, and sometimes a few large feathers: these feathers are not used as a lining, but on close investigation may be seen in the interior of the vegetable wall. The inside is thickly lined with thistle down; and lastly with hair, chiefly that of the cow. When complete, the nest is capacious and rather shallow; the eggs are five or six in number, and of a long oval form: the ground-colour is delicate bluish-white, tinged occasionally with a yellowish or greenish hue, and sprinkled over with pale grey and dusky spots; these are usually scattered equally over the whole surface, but in some specimens they are found confined to a zone around the larger end: an egg thus marked is represented in the accompanying Plate, fig. 85.

After they leave the nest, the young birds of this species remain with their parents during the rest of the summer and autumn; and from the disparity of their plumage may readily be distinguished.

When they first begin to run about, their plumage exhibits none of the black marking that distinguishes the adult, and the white portions are obscured by a greyish tinge, the crescent upon the breast, which later in the season is well defined, is at this time only indicated by a few dark feathers which appear upon the greyish-white breast.

After the autumnal moult the colours become more distinct, and the crescent upon the breast is black; still no black appears either upon the head or back, which remain of one equal tint of ash-colour, in some specimens strongly tinged

with green; the head darkens by degrees, and the forehead becomes of a dirty yellowish-white.

Great changes yet remain to be effected before the spring plumage is attained. These changes used to be attributed to the actual shedding and renewing of the feathers in spring, as well as in autumn; but later observations appear to contradict this supposition, and we are assured by Mr. Yarrell, that these changes of colour take place in the feather itself; and, consequently, that the Wagtail is subject only to a single and not a double moult.

The entire length of the Pied Wagtail is seven inches and a half. The beak from the tip to the forehead measures five lines. The wing from the carpus to the tip is nearly three inches and a half. The tail-feathers measure three inches and three quarters, and extend two and a half inches beyond the tips of the folded wings. The tarsus measures eleven lines, and the expanse of the foot, from the tip of the hinder to that of the middle claw, one inch and four lines. In this species when the wing is closed, the first, second, and third quill-feathers, and the tip of the longest tertial, are of equal length. The twelve feathers of the tail are nearly equal in length; the central pair, although the broadest at the base, are much narrowed towards the tip: the upper tail coverts are very long, covering nearly half the tail.

The female of this species is half an inch less in entire length, and all other measurements in proportion.

The adult male in winter plumage, as represented in the lower figure of Plate 85, from a specimen shot in December, is as follows:—crown of the head and nape, crescent upon the breast, rump, and upper tail-coverts, and the eight middle feathers of the tail, perfect inky black: the head and rump with purple reflections. The back and scapulars are also black, but the feathers in the middle of the back broadly fringed with hoary ash, slightly tinged with green. The

quill-feathers are black, narrowly edged with white; the tertials and the two lower rows of wing-coverts are also black, broadly edged with pure white; the lesser wing-coverts are entirely black. The flanks are slate-colour, softened into the white of the belly: the forehead is white, also the space around the eyes, the ear-coverts, the chin, and upper part of the breast: all the under parts below the black crescent are also white. The two outer tail-feathers on each side are white, except a portion of the inner web towards the base, which is occupied by a wedge-shaped black mark. The beak, legs, and feet are black, the iris very deep brown, appearing almost black.

The summer plumage of the adult male has less white than in winter: the white edges on the quill-feathers have disappeared, and the edges of the tertials and coverts are narrower. The back is entirely black, and the black crescent has extended itself upwards to the chin. A narrow white band borders the side of the breast, but does not extend so far as to divide the black head from the crescent, which are always in this species united in mature plumage.

The female differs from the male chiefly in the colour of her back and scapulars, which are never black, but pale ash-grey, and her quill-feathers incline to dusky.

The food of this species is various; in summer it consists of winged insects which they find among the grass, or spring after as they rise from it; they also frequent the shallow borders of rivers for the small fry of fish, which they catch with great dexterity: besides which they feed upon some species of water limpet, fragments of which may be found in their stomachs.

The upper figure in Plate 85 represents an adult female in summer plumage.

PLATE LXXXVI.

GREY WAGTAIL.

MOTACILLA BOARULA. (*Linn.*)

THE GREY WAGTAIL, which may readily, and at any distance be distinguished from all its British congeners by the greater length of its tail, is far less abundant in this country than the preceding species. In its manners it much resembles the pied-wagtail, but is even more light and elegant in its actions, as well as more beautiful in its plumage. It appears, also, more decidedly a frequenter of river sides, at least such are its habits in winter, at which season these birds are found with tolerable frequency on the banks of the Thames and its tributary streams, where they may be seen standing upon the clods of turf, or little islets of shingle that appear above the rippling water, or wading into the stream in search of food. Their flight is remarkably light, owing to their slender forms and lengthened tails. These birds are considered to be permanent residents in this country, without migrating to or from it, and such is probably the truth. Yet limited migrations from north to south take place, and it is the general impression that this species inhabits chiefly the northern parts of England in the summer, and the southern parts in the winter; but this, although probably true of the greater number, does not apply to all, as instances have been frequently recorded of its remaining during summer in the

Pl. 86.

most southern counties to breed. If we may hazard an opinion on the subject, in support of which we can at present offer no proof, it is, that when this species appears in spring to retire from the south, it does not leave us on so distant a journey as is usually supposed, but on abandoning the low and sheltered river sides, where it has passed the winter, it only retreats to upland and hilly, or more wild and unfrequented spots, where it can in greater safety rear its young. A communication which appeared in a late number of the "Zoologist," from the pen of J. Heppenstall, Esq., of Upperthorpe, near Sheffield, seems to confirm this supposition. "The Grey Wagtail, (*M. boarula*,)" says that gentleman, "resides with us all the year; in the winter season it is to be found along every brook, and even on the banks of the rivers Sheaf and Don, in the middle of our populous town, then, of course, in its plainer plumage. In the beginning of April it acquires its black throat, and then retires to the margins of the mountain streams on the adjacent moors, to breed." We have this species in tolerable plenty on the banks of the Thames that border Surrey and Middlesex, in autumn, as early as the middle of September, but never met with one in its summer garb, although nests and eggs that we believe to belong to this species have been brought to us.

The food of this Wagtail consists of various insects, such as flies and other winged inhabitants of grassy river sides, small water beetles, &c., and the minute mollusca that abound in such situations.

The nest of the Grey Wagtail is placed usually upon the ground, and is composed of fine grasses and fibrous roots, with a few feathers, and lined with a great quantity of the hair of cows and other animals, as well as horse-hair, which latter material forms the innermost, or true lining of the nest. The eggs, five or six in number, are of a short, oval

form, the shell thin and not much polished, measuring about eight lines by six and a half; they are yellowish stone colour in the ground, equally sprinkled over the whole surface with pale rufous-brown and ash-grey spots. Some specimens, as the one figured in the Plate, are nearly plain yellowish-brown, sometimes approaching to cream-white.

The Grey Wagtail has an extensive range over the European and Asiatic continents, being found as far as Japan, and the isles of Sumatra and Java. It inhabits also Switzerland, Italy, and Spain, and is found, according to Mr. Drummond, in the island of Corfu in winter, but is considered rare.

The entire length of this species is seven inches five lines. The wing, from the carpus to the tip, measures three inches, and the tail extends two inches and a half beyond the tips of the folded wings. The tarsi measure nine lines, and the expanse of the foot is one inch and one line. The feet are small in proportion to the size of the bird, and the hinder claw measures only two lines, very little exceeding that of the middle toe. The beak is rather long and slender, measuring five lines from the forehead to the tip, and eight lines from the tip to the gape. The tail-feathers are of equal length; the tertials are very long and pointed, and the largest passes beyond the tips of the quill-feathers when the wing is closed; the three first quill-feathers are nearly equal in length.

The plumage of the adult male in summer is as follows:—the forehead, crown of the head, nape, ear-coverts, back, and scapulars, fine bluish-grey; a streak of darker grey commences at the base of the beak, and passes through the eye towards the nape, and a white streak passes above and below it. The chin and throat are intense black, bounded on the exterior edge by a band of white, which commences at the base of the lower mandible, and extends nearly to the middle of the breast. The rest of the under parts, together with the

lower part of the back, are fine golden or ranunculus-yellow; the upper tail-coverts yellow, tinged with olive. The quill-feathers of the wings, and the greater and lesser coverts of the same are dusky, bordered with a paler tint of dusky-grey; the secondaries and tertials are dusky, inclining to black, with white borders along the outer web. The six middle feathers of the tail are dusky-black, slightly bordered towards the base with yellow; the outer feather on each side is white, the two next the same, except a narrow border of black upon the outer web, towards the base. The beak is dusky, the edges of the mandibles paler; the iris is dusky; the legs and feet flesh-colour.

The above is the dress of the adult male in the short period of the breeding season. At the autumnal moult, the black feathers of the throat are exchanged for white, and the upper part of the breast is tinged with rufous; the bright yellow feathers of the breast, belly, and flanks give place to white, clouded with pale sulphur. As spring advances, the under parts become richer in colour, and the basal parts of the throat-feathers become black; this colour gradually encroaches upon the white until it again occupies the whole feather.

The colours of the female are paler and less clean than those of the male, and she is believed not to attain the black throat until after the lapse of several years. The young birds in autumn much resemble the adult at that season. Nestlings, before the first autumual moult, have the grey of the back strongly tinged with olive, and the streak over the eye indistinct and soiled with yellow.

The upper figure in Plate 86 represents an adult male in the breeding season; the lower figure the same, after the autumnal moult, from a specimen shot on the Thames, towards the end of September.

The egg figured 86 is that of the Grey Wagtail.

PLATE LXXXVII.

RAY'S YELLOW WAGTAIL.

MOTACILLA RAYI.

THIS lively species is a well-known summer visitor to this country, which appears to be the most northern limit of its migration. It arrives in England about the middle of April, and departs from thence southward as early as September. Its migration northward is more limited than that of the former species, seldom penetrating into Scotland, nor to much extent into Ireland. Its course, when leaving this country, which it does in small flocks, appears to be directed due south, which may account for its being unknown on the European continent. Montagu speaks of this species as "said to be" an inhabitant of Siberia and Russia in summer; but probably the *M. citreola* of Pallas has been thereby intended, since Temminck does not acknowledge it as a continental species.

The Yellow Wagtail appears to frequent the water rather less than the other species of this family, and is more frequently seen in upland fields or walking over the furrows of newly-ploughed land. These birds, however, frequently appear in company with the Pied species on lawns and in gardens, exhibiting the same manners. They are usually seen in pairs, or in autumn in small families, and show a strong attachment to one another. A remarkable instance

of this once occurred to me. Being on the Thames one day, early in May, I saw a pair of Yellow Wagtails on the bank of the river. Observing that they were very close together, and being, at the time, in want of specimens, I fired, and winged one of them. The other bird, although apparently much frightened, remained hovering over its mate that lay on the grass, and touched it with its little feet and beak repeatedly. I was much grieved at having deprived the little creature of its mate, and as it would not be driven away, I loaded my gun again and shot the second bird on the wing, which fell close by its companion. The plumage of these two birds was very nearly similar when seen at a distance, but, on examination, the yellow underparts of the female were not so rich in colour, and the streak over the eye and the chin nearly white; the breast was strongly tinged with ochre, and the crown of the head and nape were bistre. Earlier in the spring, we have observed still more difference in the plumage of the two sexes.

An adult male, shot the 4th of July, had the following plumage. The top of the head and nape, the back and scapulars, and the upper coverts of the tail, olive, tinged with yellow; the cheeks the same. The forehead, a streak over the eye, and all the under parts rich golden yellow. The bill, orbits, and legs, black; the claws exceedingly slender. (This specimen had the crown of the head greyish-white, from the wearing away of the feathers; it was moulting.) The under surfaces of the wings were hoary. The two outer tail-feathers on each side are white, except a portion of the inner web in a slanting direction, so that when the tail is spread they appear quite white. The rest of the tail-feathers are blackish-brown, slightly edged towards the root with yellow. The wings hair-brown, all the feathers slightly edged with yellowish-white. The en-

tire length of this specimen was six and a half inches. The wing, from the carpus to the tip, is three inches; and the tail extends beyond it one inch and three quarters. The first three quill-feathers are of equal length, and the longest tertial exceeds them by about a line; the beak is five and a half lines from the forehead to the tip, very slender and slightly bearded; the tarsus measures ten lines, the middle toe nine lines; the claw of the hinder toe is long and nearly straight, measuring five lines.

The young birds of the year, in autumn, differ greatly from the adult. Their upper parts are strongly tinged with olive-brown. The chin is nearly white, the eye-streak rufous-white, the breast darker rufous, or ochre-yellow, and the underparts very pale and dirty yellowish-white. The wings and tail as in the adult.

This species is the *Motacilla flava* of our countryman Ray, who first described it, but not the *M. flava* of the Continent.

The nest of the Yellow Wagtail is usually built upon the ground, sometimes placed a little above it in an osier stump, or similar elevation. It is found in various localities, in open situations of meadow or moorland, and we have also met with it in islands upon the Thames occupied as osier grounds, in which places the species appears to abound. The nest is constructed of fine dry grass and fibrous roots, lined with the hair of horses and cows. One of our specimens is composed almost entirely of green moss, with a few tufts of grass outside, and one or two long horsehairs within. The eggs are usually of a long, oval form, about eight lines and a half long: the ground colour greenish-white, thickly freckled over with ash-grey and pale rufous-brown. Some specimens are nearly plain rich ochre, slightly marbled; such are usually smaller in size.

The egg figured 87 is that of the Yellow Wagtail of Ray.

INSESSORES.
DENTIROSTRES.

MOTACILLIDÆ.

PLATE LXXXVIII.

WHITE WAGTAIL.

MOTACILLA LOTOR. (*Rennie.*)

WHILE enumerating the several kinds of Wagtails that are found in this country, we mentioned, in page 204, that a fifth species, new to British ornithology, had recently been added to the list. This species is the *Motacilla alba* of Linn., the common Black and White Wagtail of the Continent of Europe. Although long suspected to inhabit this country, the existence of the species in England was not ascertained until Mr. Bond of Kingsbury, in May 1841, procured some specimens on the banks of a reservoir near that place. Since that time, many individuals have been observed and procured. We ourselves suspected, many years ago, that more than one species of Pied Wagtail inhabited this country, having observed that those which frequented walls, parapets, and roofs of barns, etc., and road-sides in high situations, differed in appearance from such as are commonly seen by the river-side. In pursuance of this inquiry, we procured several specimens, varying much in appearance, and sent them to an ornithological friend for examination. These, however, proved, or were supposed to be the common pied-wagtail of England, in different states of age and sex. The attention of naturalists was, however, awakened to the subject, and the result has been, as

above stated, the discovery of the continental *Motacilla alba*, as an inhabitant of this country.

The White Wagtail occupies throughout the European Continent the place filled here by the pied species, and much resembles it in habits and manners. In summer, it is to be met with all over Europe, from Iceland, Sweden, and Norway, down to the most southern parts, and is found also in the northern parts of Asia. These birds are migratory in their habits, and appear to absent themselves from most European countries for a period, during severe weather. Mr. Drummond, in a list of the birds that frequent the island of Crete, mentions that a few specimens of the *M. alba* were seen at the end of April, after which they disappeared. These were, doubtless, on their passage from Africa to Europe. In Corfu, we are informed, by the same gentleman, that these Wagtails are most numerous in winter, when they may be seen in large flocks, frequenting the marshes, and disappear in summer.

On the Continent of Europe the White Wagtail is found in all situations of a moderately level character, inhabiting fields and cultivated parts, as well as heaths and moors. It frequents roadsides and open spaces in villages and towns, and delights to run upon the tops of low buildings, walls, and bridges, and to perch upon stacks of wood, or piles of stones. Like our more common species, they also follow the husbandman in his various field occupations of ploughing and harrowing, etc., for the sake of the small insects that are turned up by the stirring of the soil. They are found upon or near the sea-coast, as well as in more inland parts, upon the banks of rivers, as well as in countries of a more dry and elevated character. These birds roost among the branches of low trees, such as pollard willows and brushwood, and also among rushes and reeds, and are frequently observed to congregate together, with considerable clamour, in some

chosen spot of this description, whither they appear to resort from the country around.

On the Continent of Europe, in similar latitudes with our own, they arrive in March and April from their winter quarters, and roost among reeds, as before mentioned, assembling soon after sunset and dispersing at daybreak.

As soon as the willow-trees are in leaf they resort to them as a matter of course, and continue to frequent them during the breeding-season, and roost in such as overhang the watery bank on which the nest is placed.

The young birds accompany the parents in their flights during the summer, and migrate with them in autumn. Before their departure they may be seen in small parties flying together, and pursuing one another with graceful and quick movements.

In its general character, the White Wagtail is restless and active, social in its habits, and consequently everywhere well known. From the first dawn of morning till dark they are constantly in motion, and, although they have considerable exercise in providing food, they still further employ their activity in chasing one another, and frequently join other small birds in pursuing and driving off birds of prey. On the ground they run at an indescribably swift pace, and, considering that they nod with their heads at each step, the bodily exercise of these birds is wonderful. Their flight is in long arches, and performed in about mid-elevation.

The food of the White Wagtail consists of various kinds of insects and their larvæ, which they readily obtain in all the different situations they frequent, either among the stones on the banks of rivers, or upon green water weeds, on the roofs of buildings, or in ploughed fields.

The nest of this bird is differently situated, according to existing circumstances; it generally occupies a hole, but shelter appears to be more sought after than concealment,

as the grasses and other materials frequently straggle out. It is often found in a hole in a tree, sometimes high in the stem and sometimes low, or among the roots that have become exposed by water-courses, in heaps of stones, or among felled timber. Occasionally, the nest of this bird is found under the eaves of a roof among the timbers, or in a straw thatch. Both male and female assist at the construction of the nest, the foundation of which consists chiefly of dry sticks, roots of grasses and straw, and dried leaves, intermixed with green moss; the second layer of finer materials of the same kind, lined with wool, cow, or horse-hair, which serve as a finish, and complete the nicely-rounded cup. The eggs are similar in size and form to those of our common pied-wagtail, being very blunt at one end and pointed at the other. The shell is very smooth, but without polish. The ground-colour is bluish-white, more or less obscured by small grey specks; the eggs are, besides, speckled, and marked with very fine chocolate-coloured spots, chiefly at the larger end, and sometimes forming a zone. Six or seven are the usual number.

The young make their appearance in a fortnight, and are at first covered with a black down, with pink legs and beak, and yellow corners to the mouth.

These birds have generally two broods in the year, and in a mild spring they have eggs as early as the middle of April.

The dimensions of this species differ so little from those of the common pied-wagtail of England, that no specific distinction has been established from them. Difference enough, however, exists in the tints of the plumage and distribution of the colours, to justify the distinction recognised between them. One variation of form we suggest, which may prove, if permanent, a generic distinction, namely, that the tertials in this species are not quite so long in proportion as in the *Motacilla lotor*.

The dimensions of the White Wagtail are as follows.

Entire length, seven inches and a quarter. The wing, from the carpus to the tip, measures three inches one line; and the tail two inches eleven lines, two inches of which extend beyond the tips of the folded wings. The beak measures four lines and a half from the forehead to the tip, it is very slender, and strongly notched; the nostrils are oval. The first, second, and third quill-feathers are nearly equal in length, the second rather exceeding the rest. The tarsi measure ten lines, the middle toe nine: the legs and feet are small and slender, and the claws very sharp.

In adult summer-plumage the male of this species has the forehead, cheeks, sides of the neck, and under plumage, pure white; the crown of the head and nape black; the throat is also black, but the black of this part is isolated, and does not at any period unite with the black of the head and nape; the back and scapulars are pale ash-colour. The eight central feathers of the tail are black, as well as the upper coverts of the same: the under tail-coverts are pure white. The quill-feathers of the wing are black, narrowly edged with white; the tertials and coverts of the wing the same, with broader white edges. The sides of the breast and flanks ash-grey; the iris, beak, and legs, are black. The female differs only in the tints of her plumage, which are less clear and full.

In winter-plumage the throat becomes white, and only a crescent of black is left upon the breast. The corners of this crescent are not so far extended as in our common pied species, and *never* unite with the black of the nape; the grey of the upper parts is paler in colour.

The young birds have the same plumage as the immature of the pied-wagtail, and complete their perfect feathering by undergoing similar changes.

PLATE LXXXIX.

GREY-HEADED WAGTAIL.

MOTACILLA FLAVA. (*Linn.*)

THIS species, lately recognized as British in consequence of the occurrence of several specimens in various parts of the kingdom, is one of the most common wagtails of the European Continent, namely, the *Motacilla flava* of Linnæus. For many years it has been strangely confused in England with a species common here, the yellow-wagtail of Ray, from which several important particulars sufficiently distinguish it in every state of plumage.

The distribution of the Grey-headed Wagtail throughout Europe and Asia, is as widely extended as that of the white-wagtail, and, as a species, it is far more numerous than that or any other. It is found in summer as high as the Arctic Circle, and in many parts of Asia and Africa; in the central states of Europe it is innumerable, inhabiting all parts of Germany, except the most mountainous. It is abundant in the islands along the western coast of Denmark, and also of Norway; and plentiful in France and Holland. In all these countries it is a summer-visitor, arriving in the most southerly parts about the end of March, or beginning of April, and penetrating gradually northward. On their first arrival these birds associate with the white-wagtails, and roost with them among the reeds. Their favourite residence in spring is in

damp, rank meadows, where low willows abound; and in pasture lands beside rivers, among the long grass. They do not, however, confine themselves to the water-side, but are found in autumn to frequent stubble-fields and sheep downs, at which time they associate with the meadow-pipit. Although not arboreal in their habits, these birds are often seen, like our own wagtails, among willows and low shrubs; their footing upon the branches appears insecure, their feet and long hinder toes being more adapted for running upon the ground, than for perching. They run very quickly, stopping before they take flight; and on alighting fan their tails up and down several times. In manners, these birds are quick, restless, and shy; in the breeding-season they exhibit more confidence, especially when accompanied by their young, of whose safety they are very watchful. Early in autumn, these wagtails assemble in flocks, and are seen to fly about for several days, as if collecting for their migratory flight; on a sudden they disappear, and by October few are left behind.

The Grey-headed Wagtail breeds in retired spots; its nest is commonly placed upon the ground, in situations similar to those chosen by our common yellow species, and the eggs, as well as the nest, bear also great resemblance.

The entire length of this species is six inches and a half. The wing, from the carpus to the tip, measures three inches two lines, and the tail extends about an inch and three-quarters beyond the tips of the wings. In the specimens that have come under our observation, the longest of the tertials do not reach to the tip of the quill-feathers by about two lines. The feet are larger and stronger than in most of this family; the tarsi measure nearly an inch, and the expanse of the foot is an inch and a half, that space being nearly equally divided between the middle and hinder toes; the claw of the hinder is four lines and a half in length, strong, and moderately arched. The first three quill-feathers of the

wing are nearly equal in length. The beak is almost six lines in length from the forehead, strong, and rather stout.

The adult male in summer has the head, nape, and ear-coverts, bluish-grey, and a narrow line of a darker tint proceeds from the eye to the beak. Above the eye, and below the ear-coverts, pass two narrow white lines, proceeding from the bases of the upper and lower mandible. The back, scapulars, and upper tail-coverts, are pure olive; the tail-feathers dusky, except the two outer on each side, which are white; the wings are dusky, with broad yellowish-white borders upon the secondaries, tertials, and wing-coverts. In autumn the under parts of the body are paler in colour.

The female in summer has nearly the same distribution of colours as the male, but they are less pure and full. In autumn the grey head of the female is clouded with olive, and the throat inclining to buff; in this state it is represented in the upper figure of Plate 89; and the male in full adult summer-plumage is represented in the lower figure. The young male of the year is much like the adult female in autumn.

PLATE XC.

ROCK PIPIT.

ANTHUS AQUATICUS. (*Selby.*)

THE PIPITS, a small group next to be described, and consisting but of four species belonging to this country, are nearly allied in habits, and manners, to the wagtails; feeding upon the same kinds of food, and living, like them, chiefly in situations of an open character, such as fields, and plains, and the gravelly shores of rivers. They are also closely allied to the larks, and resemble these latter much in form and plumage, in the construction and position of their nests, and in the character of their eggs: they appear, therefore, properly placed between the two. The generic distinctions, in point of form, between the wagtails and the pipits are slight, except in the tail, which in the wagtails is long and even at the end, and in the pipits shorter and forked.

The Rock Pipit is in this country exclusively a maritime bird, and such it was considered by Montagu, who first distinguished it from the other pipits, and described it as the dusky lark. That acute naturalist observed it first on the rocky coast of South Wales; and it has since been ascertained to inhabit most parts of the shores of England, Scotland, and Ireland, as well as the islands of Shetland and Orkney.

We have always found it impossible to reconcile, with our English Rock Pipit, the *Pipit spioncelle* of the first and second parts of Temminck's *Manuel* (although considered by that author as the same), on account of the very different localities spoken of as inhabited by the *spioncelle*. We are happy to find that Temminck has himself ascertained and corrected his error in the fourth volume of his *Manuel*, in which he gives an exact description of our indigenous species under the title of *Anthus obscurus*. From this author it appears that the Rock Pipit inhabits the island of Feroe, and the coasts of Norway, Denmark, and Sweden. It is also found in Holland, and along the western maritime borders of France. In England, as elsewhere, its residence is invariably upon the borders of the sea, seldom penetrating further inland than the salt marshes that in some places are found upon the coast. So seldom does this species wander from the immediate coast, that the occurrence of several individuals upon the banks of the river Deben in Suffolk, at the distance of eight or nine miles direct from the sea, was considered worthy of being noted in the memorandums of a friend, a good ornithologist, as a remarkable circumstance.

The food of the Rock Pipit consists of worms and marine insects, which it seeks among sea-weeds and other plants that grow upon the shores, or are thrown up by the waves.

The nest of this species is placed upon the shore, or upon the rocks, or banks, at a little elevation above it: it is composed of grasses, or the dry remains of marine plants. The eggs, usually five in number, vary considerably in appearance. Some are yellowish-white in the ground-colour, mottled over with grey and dusky brown: in some specimens the brown so much prevails as nearly to cover the eggs, which then present a mottled surface of two dark shades.

In others, even from the same nest, a very peculiar and striking difference is found. One set sent to us for examination, had one of the eggs as last described: of the other two one was of a perfect whole-coloured chocolate brown, the other of an even tint of greenish grey, much resembling the colour of some of the plain specimens of the nightingale's eggs; this latter specimen has a fine hair-like streak surrounding the egg towards the larger end. These specimens were from the coast of Suffolk. All the eggs of this species that we have seen, have very little polish on the surface, and are of an uniform shape and size, nearly nine lines long and six and a half lines in diameter.

The Rock Pipit is indigenous in this country, and remains stationary, as far as its habits are known, throughout the year. On the northern coasts of Europe it is only known as a summer visitor, retiring southward in autumn. Whether any accession of numbers takes place on our shores, we are not aware, but it is highly probable that some of this species may, like the larks, seek refuge here from the inclemencies of northern climates.

The distribution of this species towards the east, does not appear to be extensive; no mention is made of it in Mr. Drummond's list of the birds of Corfu and Crete, and Temminck has received no specimens of this species from Japan.

The entire length of this species is rather above six inches and a half, and it is a stout and large-made bird, weighing seven drams. The wing measures from carpus to tip three inches and a half, and the tail extends beyond the closed wings about an inch and five lines. The wing has the first quill-feather the longest, the second, third, and fourth gradually diminishing in length in a very trifling degree; the longest tertial feathers reach to within three lines of the tips

of the primaries. The tail is forked, the outer feathers being about a quarter of an inch longer than the central ones. The beak measures five and a half lines from the forehead to the tip, is slender, and sharply pointed. The tarsi are ten lines in length; the middle toe nearly the same; the hinder toe measures eight lines, of which four belong to the claw. All the claws are slender and much arched; the hinder one forming in the arch one third of a circle;—thus admirably and beautifully is this species adapted to retain a safe footing upon the rocks and among the shingly localities in which it dwells.

The plumage of this species is as follows:—The whole upper feathering, including the crown of the head and ear-coverts, the nape, back, scapulars, upper coverts, and the two middle feathers of the tail olive-brown; the centre of the feathers on the back and scapulars marked with dusky streaks. The quill-feathers are dark-brown, with lighter edges; the greater and lesser coverts olive-brown, edged and tipped with a paler colour. The outermost feathers of the tail are dirty white, the rest, except the centre pair, dusky. The under parts of the body are pale ochre-yellow, tinged with olive, and an obscure streak of the same passes over the eye: the breast is marked with dusky spots, and the flanks with long streaks of the same colour: the flanks and thighs are also tinged with olive. This species appears to undergo some variations of colour at different seasons, being observed to have most of the olive-tinge in autumn.

We are unwilling to add another name to the long list already bestowed upon this bird, as tending, perhaps, to add to the confusion that now exists on the subject, or we would suggest *Maritimus* as a more proper trivial name for this species, than those it at present bears.

The egg of the Rock Pipit (which stands at the bottom of

85.

86.

87.

89.

a plate, containing four figures) has been numbered by mistake 89, instead of 90, the number it ought to have borne.

The egg marked 90 *var :* is a representation of the variety of the Rock Pipit mentioned in the preceding page.

END OF THE SECOND VOLUME.

LONDON:
Printed by S. & J. BENTLEY, WILSON, and FLEY,
Bangor House, Shoe Lane.